

THE BHAWANIPUR EDUCATION SOCIETY COLLEGE

5, Lala Lajpat Rai Sarani, Kolkata - 700 020 Phone : 4019-5555 • Fax : 91 33 2281 4275 Email : info@thebges.edu.in Website : www.thebges.edu.in

1.3.1: Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Additional Information - Sample

Serial No.	Particulars				
1.	List of Courses related to crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum				
2.	Syllabus of relevant courses				
3.	Sample events organized related to crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability				

Estd. & Admin. by : The Bhawanipur Gujarati Education Society A Minority Run Institution : Affiliated to The University of Calcutta Recognized u/s 2(f) & 12(B) of the UGC Act, 1956



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1. List of Courses related to crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

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1.3.1 - Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Programme Code	Programme name	Link to the relevant Document
AECC-2	Ability Enhancement Compulsory Course-2 (AECC-2)	https://www.caluniv.ac.in/cbcs-ug/ug-files/Env-Studies.pdf
HISA	B.A. Honours in History	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-History.pdf
PLSA	B.A. Honours in Political Science	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-PolSc.pdf
PHSA	B.Sc Honours in Physics	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-Physics.pdf
CMSA	B.Sc Honours in Computer Science	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-CompSc.pdf
ECOA	B.Sc Honours in Economics	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-Economics.pdf
JORA	B.A. Honours in Journalism and Mass Communication	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-JMC.pdf
SOCA	B.A. Honours in Sociology	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-Sociology.pdf
B.Com(G)	B.Com General	https://www.calupiy.ac.in/chcs-ug/ug-files/Course-Structure-Syllabi-BCom.pdf
B.Com(H)	B.Com Honours	https://www.calumv.ac.m/cbcs-ug/ug-mes/course-on ucture-synabl-bcom.pur
BBA(H)	BBA Honours	https://www.caluniv.ac.in/cbcs-ug/ug-files/UG-BBA-11-6-18.pdf
M.Com	M.Com	https://www.caluniv.ac.in/cbcs-pg/pg-files/Mcom.pdf

S. Gango padyay

Dr. Subhabrata Ganguly Teacher in Charge The Bhawanipur Education Society College



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2. Syllabus of relevant courses

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UNIVERSITY OF CALCUTTA

NISHAT ALAM



Secretary, Councils for Undergraduate Studies, University of Calcutta.

Ref. No. CUS/154/17

SENATE HOUSE

87/1, College Street, Kolkata–700 073. Phone : 2257-3376, 2241-0071-74 e-mail: u.g.councilsc.u@gmail.com Website: <u>www.caluniv.ac.in</u>

Dated the 26th May, 2017

To

The Principals

of all the Undergraduate Colleges offering B.Com (Honours & General) courses affiliated to the University of Calcutta.

Sir/Madam,

The undersigned is directed to forward you the University Notification No. CSR/26/17, dt. 26.05.2017 containing new course structure, syllabi and revised admission regulations for three-year B.Com. (*Honours & General*) Courses of Studies.

The above shall be effective for the students getting admission to the three-year six-semester B.Com. (Honours & General) Courses of Studies under CBCS, from the academic session 2017-18 and onwards.

The said notification along with detail course structure, syllabi and admission regulations are available in the Calcutta University website.

Thanking you,

Yours faithfully,

Enclo.: C.U. Notification No. CSR/26/17, dt. 26.05.2017

(NISHAT ALAM) Secretary



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 26 /17

It is notified for information of all concerned that the Syndicate in its meeting dated 23.05.2017 (vide Item No.46) resolved to approve the New Course Structure & Syllabi and revised Admission Regulations for the B.Com. (Honours and General) courses of study under this University as laid down in the accompanying pamphlet.

The above shall be effective for the students getting admission to the 3-year 6-Semester B.Com. (Honours and General) courses of study under CBCS, from the academic session 2017-2018 and onwards.

SENATE HOUSE KOLKATA-700073 The 26th May, 2017

(Prof. Dr. Rajagopal Dhar Chakraborti)

Registrar

PART-B

Regulations relating to Admission for the Three-Year B.Com. (Honours & General) Courses of Studies conducted by the University of Calcutta

Admission Qualifications

 A candidate who has passed the Higher Secondary (10+2) or its equivalent Examination is eligible to seek admission to the 1st year of the 3-year B.Com. (Honours/General) Course of Studies provided he/she has also passed in English having full marks not being less than 100 and fulfills the conditions as laid down in clause 2.

Candidates who have passed the Higher Secondary (10+2) Vocational Examination in Business & Commerce conducted by the West Bengal State Council of Vocational Education and Training shall be eligible to seek admission to the B.Com. (General) 1st year Course of Studies under this University. However, no candidate shall be allowed admission after a lapse of more than 5 years from the year of passing the previous qualifying examination.

(**Explanation:** The year of admission shall not be taken into account while calculating five years from the year of passing the previous qualifying Examination).

For the purpose of determining eligibility for admission to the B.Com. Honours Courses, aggregate marks shall be calculated by adding the marks in top-four subjects in order of marks secured by a candidate. However, marks in compulsory Environmental Education/Studies shall not be taken into account for calculation of aggregate marks. However, If the subject "Environmental Science" is studied as an elective subject of 100 marks, it may be taken into account for the purpose of determining the aggregate marks.

- 2. (a) A candidate taking up B.Com. Honours Course in a subject must have obtained:
 - i. A minimum of 50% marks in the aggregate and 45% marks in the subject or related subject at the previous qualifying examination.

OR

ii. 55% marks in the subject or related subject at the previous qualifying examination.

(b) However, candidates belonging to the Scheduled Caste or Scheduled Tribe Community taking up Honours Course of Study mast have obtained a minimum of 40% marks in the aggregate or 40% marks in the subject or related subject at the previous qualifying examination, as the case may be.

(c) Seat reservation for admission in the first year class of three-year degree courses of studies shall be guided by the West Bengal State Higher Educational Institutions (Reservation in Admission), Act, 2013 and the West Bengal State Higher Educational Institutions (Reservation in Admission) Rules, 2014.

(d)Following subjects be treated as related subjects for admission to B.Com. Honours courses:

Accountancy, Business Economics including Business Mathematics, Business Organization, Mathematics, Business Mathematics, Economics, Statistics, Business Studies, Office and Secretarial Practice, Financial Accounting, Elements of Cost Accountancy & Auditing, Book Keeping, Commerce, Cost Accountancy & Principle of Management, Commercial Law and preliminaries of Auditing, Costing and Taxation.

(e)A candidate shall be allowed to take up B.Com. (General) Course if he/she had passed the subject(s) at the previous qualifying examination as mentioned below:

Accountancy/ Business Economics including Business Mathematics/ Business Organization/ Mathematics/ Economics/ Statistics/ Commerce/ Accounts/ Business Studies/ Financial Accounting/ Office and Secretarial Practice/ Elements of Cost Accountancy and Auditing/ Book Keeping/ Business Mathematics/ Cost Accountancy & Principle of Management, , Commercial Law and preliminaries of Auditing, Costing and Taxation.

- 3. Students who have passed the Higher Secondary (10+2) Examination or its equivalent from the All India Boards/Councils (i.e. CBSE, ISC and National Institute of Open Schooling) <u>need</u> not require to submit the Migration Certificate for getting Registration under this University.
- 4. A candidate who is admitted to the Honours or General Course of Studies may take any of the four DSE (Discipline Specific Elective) Courses, two courses in each of the 5th and 6th Semester (as offered by the College).

5. B.Com. Honours & General Course Curricula / Structure

<u>B.Com. Honours</u> Course Structure under Semesterised CBCS Year I: Semester I

		Marks	Credit Hours	
AECC 1.1Chg	Language:	100	2	
	Communicative English - 50			
	Indian Language - 50			
GE 1.1 Chg	Microeconomics I &	100	6	
	Statistics (50+50)			
CC 1.1 Chg	Business Laws	100	6	
CC 1.2 Chg	Principles of Management	100	6	
CC 1.1 Ch	Financial Accounting - I	100	6	
			26	

Year 1: Semester II

		Marks	Credit Hours	
GE 2.1 Chg	E-Commerce & Business Communication (50+50)	100	6	
CC2.1 Chg	Company Law	100	6	
CC 2.2 Chg	Marketing Management and Human Resource Management	100	6	
CC 2.1Ch	Cost and Management Accounting - I	100	6	
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Year 2: Semester III

		Marks	Credit Hours	
SEC 3.1 Chg	Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100	4	
GE 3.1 Chg	Business Mathematics & Statistics	100	6	
CC3.1 Ch	Financial Accounting II	100	6	
CC3.2 Ch	Indian Financial System	100	6	

Year 2: Semester IV

		Marks	Credit Hours	
GE 4.1 Chg	Microeconomics II & Indian Economy (50+50)	100	6	
CC 4.1 Chg	Entrepreneurship Development and Business Ethics	100	6	
CC 4.1 Ch	Taxation I	100	6	
CC 4.2 Ch	Cost and Management Accounting -II	100	6	

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Year 3: Semester V

		Marks	Credit Hours	
CC 5.1Ch	Auditing & Assurance	100	6	
CC 5.2 Ch	Taxation II	100	6	
DSE 5.1 A*	Economics II and Advanced Business Mathematics	100	6	
DSE 5.2 A*	Corporate Accounting	100	6	
			24	

Options:

*Or DSE 5.1 M (Consumer Behaviour and Sales Management -50+50) & DSE 5.2 M (Product & Pricing Management and Marketing Communication (50+50)

*Or DSE 5.1T (Public Finance and Taxation) & DSE 5.2 T (Direct Tax: Laws and Practice)

*Or DSE 5.1 e-B (Fundamentals of Computer) & DSE 5.2 e-B DBMS and System Analysis &Design (50+50)

Year 3: Semester VI

		Marks	Credit Hours	
AECC 6.1Chg	Environmental Studies	100	2	
SEC 6.1Chg	Computerised Accounting and e-Filing of Tax Returns	100	4	
CC 6.1 Ch	Project Work	100	6	
DSE 6.1 A**	Financial Reporting and Financial Statement Analysis	100	6	
DSE 6.2 A**	Financial Management	100	6	
			24	

Chg: Common for Honours and General; Ch: Core Course for Honours

Options:

**Or DSE 6.1 M (Retail Management and Marketing of Services (50+50) & DSE 6.2 M (Rural Marketing and International Marketing (50+50)

**Or DSE 6.1 T (Indirect Tax: Laws and Practices)& DSE 6.2 T (Tax Procedures and Planning)

**Or DSE 6.1 e-B (Internet & WWW and Functional e-Business System (50+50)
& DSE 6.2 e-B(Computer Applications and e-Business Applications – Practical (50+50)

		Marks	Credit Hours	
Ability Enhancement	Two Papers	200	$2 \times 2 = 4$	
Compulsory Course				
(AECC)				
Skill Enhancement	Two Papers	200	2x4 = 8	
Elective Course (SEC)				
Generic Elective (GE)	Four Papers	400	4 x 6 = 24	
CORE COURSE (CC)	Fourteen Papers	1400	14x 6 = 84	
Discipline Specific	Four Papers	400	4 x 6 = 24	
Elective (DSE)				
		2600	Total 144	

Summary for B.Com. Hons.

B. <u>B.Com. General</u> Course Structure under Semesterised CBCS

		Marks	Credit Hours	
AECC 1.1Chg	Language:Communicative English - 50Indian Language - 50	100	2	
GE 1.1 Chg	Microeconomics I & Statistics	100	6	
CC 1.1 Chg	Business Laws	100	6	
CC 1.2 Chg	Principles of Management	100	6	
CC 1.1 Cg	Financial Accounting - I	100	6	

Year I: Semester I

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Year 1: Semester II

		Marks	Credit Hours	
GE 2.1 Chg	E-Commerce & Business Communication (50+50)	100	6	
CC 2.1 Chg	Company Law	100	6	
CC 2.2 Chg	Marketing Management & Human Resource Management	100	6	
CC 2.1Cg	Cost and Management Accounting I	100	6	

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Year 2: Semester III

		Marks	Credit Hours	
SEC 3.1 Chg	Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100	4	
GE 3.1 Chg	Business Mathematics & Statistics	100	6	
CC 3.1 Cg	Financial Accounting II	100	6	
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Year 2: Semester IV

		Marks	Credit Hours	
GE 4.1 Chg	Microeconomics II & Indian Economy (50+50)	100	6	
CC 4.1 Chg	Entrepreneurship Development and Business Ethics	100	6	
CC 4.1 Cg	Taxation I	100	6	
CC 4.2 Cg	Cost and Management Accounting -II	100	6	

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Year 3: Semester V

		Marks	Credit Hours	
CC 5.1 Cg	Auditing & Assurance	100	6	
DSE 5.1 A*	Taxation II	100	6	
DSE 5.2 A*	Corporate Accounting	100	6	
			18	

Options:

*Or DSE 5.1 M (Consumer Behaviour and Sales Management -50+50)

& DSE 5.2 M (Product & Pricing Management and Marketing Communication (50+50)

*Or DSE 5.1T (Public Finance and Taxation)

& DSE 5.2 T (Direct Tax: Laws and Practice)

*Or DSE 5.1 e-B (Fundamentals of Computer)

& DSE 5.2 e-B DBMS and System Analysis & Design (50+50)

Year 3: Semester VI

		Marks	Credit Hours	
AECC 6.1Chg	Environmental Studies	100	2	
SEC 6.1 Chg	Computerised Accounting and e-Filing of Tax Returns	100	4	
DSE 6.1 A**	Financial Reporting and Financial Statement Analysis	100	6	
DSE 6.2 A**	Financial Management	100	6	
			18	

Chg: Common for Honours and General; Cg: Core Course for General Options:

**Or DSE 6.1 M (Retail Management and Marketing of Services (50+50) & DSE 6.2 M (Rural Marketing and International Marketing (50+50)

**Or DSE 6.1 T (Indirect Tax: Laws and Practices) & DSE 6.2 T (Tax Procedures and Planning)

**Or DSE 6.1 e-B (Internet & WWW and Functional e-Business System (50+50)
& DSE 6.2 e-B(Computer Applications and e-Business Applications – Practical

(50+50)

Summary for B.Com. General

		Marks	Credit Hours
Ability Enhancement	Two Papers	200	$2 \times 2 = 04$
Compulsory Course			
(AECC)			
Skill Enhancement	Two Papers	200	2x4 = 08
Elective Course (SEC)			
Generic Elective (GE)	Four Papers	400	4 x 6 = 24
CORE COURSE (CC)	Eleven Papers	1100	11 x 6 =66
Discipline Specific	Four Papers	400	4 x 6 = 24
Elective (DSE)			
		2300	Total 126

Extracts from UGC CBCS Model for B.Com. Hons Syllabi (Page 2) Notes:

1. For Practical Lab based

a. Core Courses BCH 1.2 (Financial Accounting), BCH 3.2 (Income-tax Law and Practice), BCH 3.4 (Business Statistics), BCH 4.2 (Business Mathematics), and BCH 5.2 (Fundamentals of Financial Management) there shall be 4 Credit Hrs. for Lectures + one Credit hr. (Two Practical Periods per week per batch) for Practical Lab + one credit Hr for Tutorials (per group)

b. Core Courses BCH 4.3 (Computer Applications in Business) and Discipline Specific Elective BCH Group A (e) (Computerised Accounting System), there shall be 4 Credit Hrs. for Lectures + Two Credit hrs. (4 Practical Periods per week per batch) for Practical Lab

c. Skill Enhancement Elective Course BCH 3.5(E-Commerce), there shall be 3 Credit Hrs. for Lectures + One Credit hrs. (2 Practical Periods per week per batch) for Practical Lab

2. For other core and elective papers, there shall be 5 lectures and one Tutorial (per batch)

From above, It appears that:

- **one credit** represents **one lecture hour** for theoretical papers and there will be **one credit hour for tutorial** for each of theoretical papers / subjects.
- For practical lab based papers, **one credit represents two practical periods** and there will be no tutorial for practical papers/subjects.

Therefore, it is suggested that:

AECC: 2 credit hours means 2 lecture hours, i.e., 120 minutes lectures or three (3) periods of 40 mins each per week.

SEC (involving lab): 4 credit hours may be divided into two credit hours for lectures (3 periods of 40 mins) and 2 credit hours for practical (4 practical periods per batch) per week

GE, CC and DSE: 6 credit hours means 5 credit hours for lectures (300 mins for lectures, i.e., 7-8 periods of 40 mins each) and 1 tutorial hour for each group/ batch of students per week.

University of Calcutta



B.Com. Syllabus (Honours) *under Semesterised CBCS*

2017

University of Calcutta Proposed <u>B.Com. Honours</u> Course Structure under CBCS Year I: Semester I

		Marks	Credit Hours	
		100	2	
AECC 1.1Chg	Language:	100	2	
	Communicative English - 50			
	Indian Language - 50			
GE 1.1 Chg	Microeconomics I &	100	6	
	Statistics (50+50)			
CC 1.1 Chg	Business Laws	100	6	
CC 1.2 Chg	Principles of Management	100	6	
CC 1.1 Ch	Financial Accounting - I	100	6	
	•		26	

Year 1: Semester II

		Marks	Credit Hours	
GE 2.1 Chg	E-Commerce & Business Communication (50+50)	100	6	
CC2.1 Chg	Company Law	100	6	
CC 2.2 Chg	Marketing Management and Human Resource Management	100	6	
CC 2.1Ch	Cost and Management Accounting - I	100	6	
			24	

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Year 2: Semester III

		Marks	Credit Hours	
SEC 3.1 Chg	Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100	4	
GE 3.1 Chg	Business Mathematics & Statistics	100	6	
CC3.1 Ch	Financial Accounting II	100	6	
CC3.2 Ch	Indian Financial System	100	6	

Year 2: Semester IV

		Marks	Credit Hours	
GE 4.1 Chg	Microeconomics II & Indian Economy (50+50)	100	6	
CC 4.1 Chg	Entrepreneurship Development and Business Ethics	100	6	
CC 4.1 Ch	Taxation I	100	6	
CC 4.2 Ch	Cost and Management Accounting -II	100	6	
			24	

Year 3: Semester V

		Marks	Credit Hours	
CC 5.1Ch	Auditing & Assurance	100	6	
CC 5.2 Ch	Taxation II	100	6	
DSE 5.1 A*	Economics II and Advanced Business Mathematics	100	6	
DSE 5.2 A*	Corporate Accounting	100	6	
			24	

Options:

*Or DSE 5.1 M (Consumer Behaviour and Sales Management -50+50) & DSE 5.2 M (Product & Pricing Management and Marketing Communication (50+50)

*Or DSE 5.1T (Public Finance and Taxation) & DSE 5.2 T (Direct Tax: Laws and Practice)

*Or DSE 5.1 e-B (Fundamentals of Computer) & DSE 5.2 e-B DBMS and System Analysis &Design (50+50)

Year 3: Semester VI

	Marks	Credit Hours	
Environmental Studies	100	2	
Computerised Accounting and e-Filing of Tax Returns	100	4	
Project Work	100	6	
Financial Reporting and Financial Statement Analysis	100	6	
Financial Management	100	6	
	Environmental Studies Computerised Accounting and e-Filing of Tax Returns Project Work Financial Reporting and Financial Statement Analysis Financial Management	MarksEnvironmental Studies100Computerised Accounting and e-Filing of Tax Returns100Project Work100Financial Reporting and Financial Statement Analysis100Financial Management100	MarksCredit HoursEnvironmental Studies1002Computerised Accounting and e-Filing of Tax Returns1004Project Work1006Financial Reporting and Financial Statement Analysis1006Financial Management1006

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Summary for B.Com. Hons.

Extracts from UGC CBCS Model for B.Com. Hons Syllabi (Page 2) Notes:

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GE, CC and DSE: 6 credit hours means 5 credit hours for lectures (300 mins for lectures, i.e., 7-8 periods of 40 mins each) and 1 tutorial hour for each group/ batch of students per week.

CONTENTS

GE 1.1 Chg

Microeconomics I & Statistics (50+50)

Marks: 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Microeconomics I

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit:I Demand and Consumer behaviour

Concept of demand, demand function, law of demand, derivation of individual and market demand curves, shifting of the demand curve; elasticity of demand.

Consumer behaviour: Marshallian utility approach and Indifference Curve approach; utility maximization conditions . Income-Consumption Curve (ICC) and Price-Consumption Curve (PCC): Derivation of demand curve from PCC.

[L-15/Marks:15]

Unit: II Production and Cost

Production function: Short-run and Long-run; Relation among Total Product, Average Product and Marginal Product, Law of returns to a variable factor, Law of Returns to Scale; Concepts of Iso-quant and iso-cost line; Conditions for optimization (graphical approach).

Cost: Accounting and Economic Costs; Social and Private Costs; Short-run and Long-run Costs; Relation between Average and Marginal Costs; Determination of LAC curve from SAC curves, LMC.

[L-10/Marks:10]

Unit: III Perfect Competition

Concept of Perfectly Competitive market: Assumptions, Profit maximization conditions; Related concepts of Total Revenue, Average Revenue and Marginal Revenue, Short-run and Longrun

equilibrium of a firm; determination of short-run supply curve of a firm, measuring producer surplus under perfect competition, Stability analysis– Walrasian and Marshallian, demand-supply analysis including impact of taxes and subsidy.

Suggested Readings

- Pindyke and Rubinfeld, Micro Economics, Pearson
- Gould & Ferguson, Micro Economic Theory
- Banerjee & Majumdar, Business Economics and Business Environment, ABS
- Banerjee & Majumdar, Banijjik Arthaniti -o- Banijjik Paribesh(Bengali)
- Dwivedi, D.N., Managerial Economics, Vikash Publications
- Mankiw.N.G., Principles of Microeconomics, Cengage
- Das, P. & Sengupta A., Economics , Oxford
- Samuelson & Nordhaus, Macroeconomics, McGraw Hill

[L-15/Marks – 15]

Module II: Statistics

Internal Assessment:	10 marks
Semester-end Examinations:	4 <u>0 marks</u>
Total	50 marks

- Fundamentals: Definition of Statistics, Scope and limitation of Statistics, Attribute and variable, Primary and secondary data, Method of data collection, Tabulation of data, Graphs and charts, Frequency distribution, Diagrammatic presentation of frequency distribution. [8 L /8Marks]
- Measures of Central Tendency: Meaning of central tendency, Common measures mean (A.M., G.M., H.M.) median and mode, Partition values- quartiles, deciles and percentiles, Applications of different measures. [8 L /8Marks]
- **3. Measures of Dispersion:**Meaning of dispersion,Common measure– range, quartile deviation, mean deviation and standard deviation; Relative measures of dispersion,Combinedstandard deviation,Applications of different measures. [8 L /8Marks]
- 4. Moments, Skewness and Kurtosis: Different types of moments and their relationships, Meaning of skewness and kurtosis, Different measures of skewness, Measure of kurtosis, Applications of different measures. [8 L /8Marks]
- 5. Interpolation: Finite differences, Polynomial function, Newton's forward and backward interpolation formula, Lagrange's interpolation formula. [8 L /8Marks]

Suggested Readings:

- Business Mathematics and Statistics- N G Das & J K Das (Tata McGraw Hill)
- Statistical Methods in Business and Social Science G. V. Shenoy and M. Pant (Macmillan)
- Business Statistics R. S. Bhardwaj (Excel Books)
- Statistics for Management Levin, Rubin and Rastogi (Pearson Education)
- Statistics for Management, Srivastava and Rego, McGraw Hill
- Hazarika Padmalochan, A Text Book of Business Statistics, S.Chand
- Kellor & Arora, Business Statistics, Cengage
- Pillai and Bhagwati, Business Statistics, S.Chand
- Business Mathematics & Statistics J. Chakraborti (Dey Book Concern)
- Business Mathematics & Statistics R K Ghosh & S Saha (New Central Book Agency(P) Ltd
- Elementary Business Mathematics & Statistics Dr. Priyotosh Khan (Elegant Publication)
- Business Mathematics & Statistics Dr. S N De (Chhaya Prakashani)
- Business Mathematics & Statistics N K Nag & S K Nag (Kalyani Publishers)
- Business Mathematics & Statistics Dr. Ranjit Dhar (Dishari Prakashani)

CC 1.1 Chg

Business Laws

Marks: 100

Internal Assessment: 20 marks **Semester-end Examinations: 80 marks** Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: The Indian Contract Act, 1872 [No of classes 30 / Marks 30]

a) Contract – meaning, characteristics and kinds, Essentials of a valid contract

b) Offer and acceptance (Definition, Rules, Communication and Revocation of offer and acceptance)

c) Consideration (Definition, Elements, Types, Rules), "No Consideration No Contract" and its

exceptions; Capacity to Parties (Definition and Types)

d) Consent, Free consent, Coercion, Undue Influence, Fraud, Misrepresentation, Mistake

e) Legality of objects and Consideration

f) Void and Voidable agreements – Definition, Types and Distinction

g) Discharge of a contract – Modes of discharge, Breach and Remedies against breach of contract

h) Specific Contracts - Contingent contracts, Quasi, Contract of Indemnity, Guarantee, Bailment,

Pledges

Unit 2: The Sale of Goods Act, 1930

a) Contract of sale, meaning and difference between sale and agreement to sell

b) Conditions and warranties

c) Transfer of ownership in goods including sale by a non-owner

d) Unpaid seller – meaning, rights of an unpaid seller against the goods and the buyer

Unit 3: Partnership Laws A) The Partnership Act, 1932

a. Definition – Partner, Partnership

- b) Nature and Characteristics of Partnership
- c) Types of Partners
- d) Registration of a Partnership Firms and consequences of non-registration
- e) Rights and Duties of Partners
- f) Dissolution of firms meaning and grounds

B) The Limited Liability Partnership Act, 2008

a) Definition

b) Salient Features of LLP

c) Advantages and disadvantages of LLP

d) Differences between: LLP and Partnership, LLP and Company

e) Incorporation of LLP

Unit 4: The Negotiable Instruments Act 1881

[No of classes 10 / Marks 10]

a) Definition, Features, Types, Parties of Negotiable Instruments: Promissory

Note, bill of exchange, Cheque (Definition and Types)

b) Endorsement: Types of Endorsement

c) Holder and Holder in Due Course, Privileges of Holder in Due Course.

[No of classes 10 / Marks 10]

[No of classes 20 / Marks 20]

d) Dishonour of Negotiable Instruments: Modes, Consequences, Notice of Dishonour; Noting and Protesting

e) Discharge of Negotiable Instruments: Meaning and Modes

Unit 5: Consumers Protection Act, 1986

[No of classes 10 / Marks 10]

a) Objectives and features of Consumers Protection Act

b) Definitions – Complainant, Complaint, Consumer, Consumer Dispute, Defect, Deficiency, District Forum, Person

c) Unfair trade practices

d) Consumer Protection Council (Central, State and District - their constitutions and objectives)

e) Consumer Dispute Redressal Agencies: Composition and jurisdiction of District forum, State Commission and National Commission

(If any new provisions are enacted in place of the existing provisions, the syllabus will accordingly include such new provisions in place of existing provisions with effect from such date as prescribed by Calcutta University. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus)

Suggested Readings

- Kumar Ravindra, Legal Aspects of Business, Cengage
- Tulsian & Tulsian, Business Laws, S.Chand
- Kapoor N.D., Business Laws, Sultan Chand
- Das S.K. & Roy P., Business Regulatory Framework, OUP
- Gulsan S.S., Business Laws, Excel Books
- Roychowdhury, Bhattacharjee & Datta, Business Regulatory Framework, Elegant Publishers
- Bhadra, Satpati and Mitra, Ainer Ruprekha (Bengali Version), Dishari

CC 1.2 Chg Principles of Management

Marks: 100

Internal Assessment: 20 marks Semester-end Examinations: 80 marks Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit-1: Introduction:

No. of classes: 16 / Marks: 16

Management-definition, importance, functions, nature-as profession, science and art, universality of management; levels of management; managerial tasks and skills.

Different Schools of Thoughts: Classical School-contributions of Taylor and Henri Fayol; Neo-classical school-Human Relations approach and Behavioral Science Approach; Modern School; System approach and Contingency approach.

Unit-2: Planning:

No. of classes: 16 / Marks: 16

Concept, importance, steps, types, premises, barriers to effective planning and remedial measures; strategic planning-concept forecasting –concept, techniques.

Unit-3: Organizing:

No. of classes: 16 / Marks: 16

Concept, importance, principles, different organization models-line and staff; Functional; Departmentation-need, basis, principles, Delegation of Authority-elements, steps barriers; Centralization and Decentralization of Authority; Span of Management; concept and determining factors.

Unit-4: Directing and Staffing:

No. of classes: 16 / Marks: 16

Directing: concepts, importance of directing, Leadership: Concept, importance, types, leadership traits, Tannenbaum & Schmidt's Model and Blake & Mouton's Model. Staffing: concepts, importance

Unit- 5: Motivation, Co-ordination and Control:

No. of classes: 16 / Marks: 16

Motivation: Concept, importance, importance of need theory, and contributions of McGregor, Maslow, Herzberg.

Coordination: concepts, importance, principles and implementation techniques. Control: concepts, importance and tools of control.

Suggested Readings

- Kaul, Principle and Practice of Management, Vikash
- Koontz & Weirich, Essentials of Management, TMH
- Koontz, Weirich & Cannice, Management, McGraw Hill
- Stoner & Freeman, Management, PHI
- Drucker, P.F., Managing Challanges for the 21st Century, Butterworth, Oxford
- Mitra, J., & Somani, N., Principles of Management and Business Communications, Oxford

CC 1.1 Ch FINANCIAL ACCOUNTING – I Marks: 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester–end Examinations FINANCIAL ACCOUNTING – I

Unit	Торіс	Details	Marks allotted	No. of Lectures
1	Introduction	 Nature of accounting; Users of accounting information; Qualitative characteristics of accounting information. Double entry book keeping system – Basic accounting equation, meaning of assets, liabilities, equity, revenue and expenses. Accounting Cycle - Recording of transaction: Journal, Ledger and preparation of Trial Balance. Bases of accounting; cash basis and accrual basis. Basic concepts and conventions: entity, money measurement, going concern, cost, realisation, accruals, periodicity, consistency, prudence (conservatism), materiality, matching and full disclosures. 	5	5
2	Concepts for determination of business income	 Revenue recognition: Meaning of revenue; objective; timing of recognition. Recognition of expenses. Inventories: meaning. Significance of inventory valuation. Lower of cost or market rule; Inventory ascertainment and reconciliation. 	15	15

		 The nature of depreciation. The accounting concept of depreciation. Factors in the measurement of depreciation. Methods of computing depreciation: straight line method and diminishing balance method; Disposal of depreciable assets; change in estimate and method of charging depreciation. Accounting for depreciation: Asset-depreciation, Asset-provision. Reserves and provisions: Meaning; Objective; Types & Accounting Capital and revenue expenditures and receipts: general introduction only. Adjustment and rectification 		
2	Introduction to Accounting Standard	Financial accounting standards: concept, benefits, procedure for issuing accounting standards in India. Need for a global standard, IFRS (concept only).	10	10
3	Introduction to Accounting Theory	Concept of accounting theory; relation with practice; GAAP; Capital – capital maintenance concepts; Limitations of Historic Cost accounting; Introduction to Fair Value accounting	10	10
4	Final accounts of Trading Concern	Preparation of financial statements: of sole proprietorship business entities from a trial balance – Manufacturing, Trading, P/L A/c and Balance Sheet	15	15
5	Financial statements from Incomplete records and of NPO	Preparation of financial statements: a) from incomplete records b) of non-profit organisation	10	12
6	Accounting for special sales transaction	 Consignment: Basic features; difference with sales. Recording in the books of Consignor – at cost & at invoice price, Valuation of unsold stock; Ordinary commission. Treatment and valuation of abnormal & normal loss. Special commission; Del credere commission (with and without bad debt) - use of Consignment Debtors A/C. Recording in the books of Consignee Accounting for sale on approval 	25	23
	Sectional and Self balancing ledger	 Concept of sectional balancing, preparation of control accounts. Self balancing Ledger: advantages; Recording process; preparation of Adjustment accounts. 		

Insurance claim for loss of stock and for loss of profit	 Loss of stock: Physical & ownership concept; concept of under-insurance and average clause; computation of claim – with price change; consideration of unusual selling line; price reduction etc. Loss of profit: Concept – insured & uninsured standing charges, GP rate, short sales and increased cost of working, average clause and computation of claim (simple type) 		
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Relevant Accounting Standards issued by the Institute of Chartered Accountants of India are to be followed.

Suggested Reading:

- Sukla, Grewal, Gupta: Advanced Accountancy Vol. I, S Chand
- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. I, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. I, Vikash Publishing House Pvt. Ltd.
- Sehgal & Sehgal, Advanced Accountancy Vol. I, Taxman Publication
- B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
- Hanif & Mukherjee, Financial Accounting, McGraw Hill
- Frank Wood, Business Accounting Vol 1, Pearson
- Tulsian, Financial Accounting, Pearson
- Mukherjee and Mukherjee, Financial Accounting I, Oxford
- Accounting Standards issued by ICAI

Year 1: Semester II

		Marks	Credit Hours	
GE 2.1 Chg	E-Commerce & Business Communication (50+50)	100	6	
CC2.1 Chg	Company Law	100	6	
CC 2.2 Chg	Marketing Management and Human Resource Management	100	6	
CC 2.1Ch	Cost and Management Accounting - I	100	6	
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GE 2.1 Chg

E-Commerce & Business Communication (50+50)

Marks: 100

Internal Assessment:20 marksSemester-end Examinations:<u>80 marks</u>Total100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I E-Commerce Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1: Introduction

E-Commerce-meaning, nature, concepts, types; e-commerce business models B2B [concept, major activities, types of B to B market (independent, buyer oriented, supplier oriented, e-market place)], B2C [portals, e-tailer, content provider, transaction broker, real life examples of B2C], C2C, C2B, etc.; forces behind e-commerce, e-Governance [meaning, types, significance, real life examples].

Unit 2: E-CRM and SCM

E-CRM-definition, features, goals of E-CRM business framework, phases of E-CRM, types of E-CRM, Functional components of E-CRM, strategies for E-CRM solutions; SCM-definition, features, types of supply chain.

Unit 3: Digital Payment

Methods of e-payments [Debit Card, Credit Card, Smart Cards, e-Money], electronic or digital wallet, digital signature (procedures, working and legal provisions), payment gateways [Core Banking Solution or CBS, Mobile Payment, UPI, NCPI, International Payments], Online banking [meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting], risks involved in e-payments.

Unit 4: ERP

Definition, features, major characteristics, levels of ERP, benefits of ERP, enterprise potential of ERP, modules of ERP, phases of ERP implementation, limitations of ERP.

Unit 5: New Trends in E-Commerce

Social Commerce-concept, definition, features; Digital Marketing-definition, objectives, methods, limitations; Advertisement in Social Media-objectives, advantages and disadvantages, procedures

Suggested Readings

- _P. T. Joseph, *E-Commerce: An Indian Perspective*, PHI Learning
- Henry Chan, Raymond Lee, Tharam Dillon, Elizabeth Chang, *E-Commerce: Fundamentals and Applications*, Wiley.
- Laudon, E-Commerce, Pearson Education India
- Schneider G., E-Business, Cengage
- Bhaskar, B., E–Commerce, McGraw Hill

[10 Marks, Class: 10]

[8 Marks, Class: 8]

[8 Marks, Class: 8]

[6 Marks, Class: 6]

[8 Marks, Class: 8]

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Module II

Business Communication

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: Introduction

Definition, objectives, importance, elements, process, forms, models, principles of effective communication, barriers to communication and remedial measures, role of communication in conflict resolution

Unit 2: Types of Communication

Formal and informal communication, Grapevine, Characteristics of corporate communication, Characteristics of corporate communication, Communication network

Unit 3: Tools of Communication

Emergence of communication technology, Modern Forms of communication, Fax, Email, Video Conferencing

Unit 4: Drafting

Notice, Circular, Resolution & Minutes, Report, CV writing, Business letter writing- Offer letter, Quotation, Status enquiry, Confirmation, Execution, Refusal and cancellation of order, Recommendation, Credit collection, Claim, Bank loan

. Suggested Readings

- Anjanee, S. & Bhavana Adhikari, Business Communication, TMH
- Chaturvedi & Chaturvedi, Business Communication : Concepts, Cases and Applications, Pearson
- M.K.Shegal &Vandana Khetarpal, Business Communication, Excel Books
- R.K.Madhukar, *Business Communication*, Vikash Publishing House Pvt. Ltd.
- Rao, Kumar & Bindu, Business Communication, Cengage
- Khanna, Puja., Business Communication, Vikash
- Raman & Sharma, Technical Communication, Oxford
- Lesikar, Flatley et al, Business Communication, McGraw Hill

[20 Marks, Class: 20]

[8 Marks, Class: 8]

[6 Marks, Class: 6]

[6 Marks, Class: 6]

CC2.1 Chg Company Law Marks: 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: INTRODUCTION TO COMPANY[No of classes 16 / Marks 16]

Meaning and Definition – Features –, High Lights of Companies Act 2013 - Body Corporate ,Kinds of Companies (Concept, Definition and Features) – One Person Company, Private Company, Public Company, Company limited by Guarantee, Company limited by Shares, Holding Company, Subsidiary Company, Government Company, Associate Company, Small Company, Foreign Company, Listed Company, Dormant company, Lifting of corporate veil.

Unit 2: FORMATION OF A COMPANY[No of classes 16 / Marks 16]

Steps in formation of a Company, Promotion Stage, Meaning of Promoter, Position of Promoter & Functions of Promoter, Incorporation Stage – Meaning, Contents, Forms of Memorandum of Association & Articles of Association and its alteration, Distinction between Memorandum of Association and Articles of Association, Doctrines of constructive notice and Indoor management, Certificate of Incorporation, Subscription Stage – Meaning & contents of Prospectus, Types, Misstatement in prospectus and its consequences.

Unit 3: COMPANY ADMINISTRATION[No of classes 16 / Marks 16]

Director (Concept and Definition), DIN, Qualification, Disqualification, Appointment, Position, Rights, Duties, Power, Resignation, Liabilities, Removal and Resignation of director. Key Managerial Personnel (Definition, Appointment and Qualifications) – Managing Director, Whole time Directors, the Companies Secretary, Chief Financial Officer, Resident Director, Independent Director, Women director.

Unit 4: SHARE CAPITAL & DEBENTURE[No of classes 16 / Marks 16]

Share, Share Capital - Types and Definition, Allotment and Forfeiture, Calls on Shares, ESOP, Buyback, Sweat Equity, Bonus, Right, Capital Reduction, Share Certificate, D-mat System, Transfer and Transmission, Redemption of Preference Shares, Debenture – Definition, Types, Rules Regarding Issue of Debenture.

Unit 5: CORPORATE MEETINGS[No of classes 16 / Marks 16]

Corporate Meetings - Shareholder and Board, Types of Meetings – Annual General Meeting Extraordinary General meeting, Minutes of Proceedings of General Meeting, Meeting of BOD and other meetings (Section 118), Requisite of Valid Meeting- Notice, Agenda, Chairman, Quorum, Proxy, Resolutions, Minutes, Postal Ballot, E- voting, Video Conferencing, Board Meetings and Resolutions

(If any new provisions are enacted in place of the existing provisions, the syllabus will accordingly include such new provisions in place of existing provisions with effect from such date as prescribed by Calcutta University. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus)

Suggested Readings

- Kumar Rabindra, Legal Aspects of Business, Cengage
- Bhadra, Satpati and Mitra, Ainer Ruprekha (Bengali Version), Dishari
- Kapoor, N.D., Corporate Law, S.Chand
- Arora, Bansal, Corporate Law, Oxford
- Roychowdhury, Bhattacharjee & Datta, Business Regulatory Framework, Elegant Publishers

CC 2.2 Chg Marketing Management and Human Resource Management Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module IMarketing ManagementInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: Introduction:

No. of classes: 8 / Marks: 8

Nature, scope and importance of marketing; Selling vs Marketing; Marketing mix, Marketing environment: concept, importance, and components (Economic, Demographic, Technological, Natural, Socio-Cultural and Legal).

Unit 2: Consumer Behaviour and Market segmentation:

No. of classes: 8 / Marks: 8

Consumer Behaviour: Nature and Importance, Factors influencing consumer buying behaviour.

Market segmentation: concept, importance and bases; Product differentiation vs. market segmentation.

Unit 3: Product:

No. of classes: 8 / Marks: 8

Concept and importance, Product classifications; Concept of product mix; Branding, packaging and labeling; Product life-cycle; New Product Development Process.

Unit 4: Pricing, Distribution Channels and Physical Distribution No. of classes: 8 / Marks: 8

Pricing: Significance. Factors affecting price of a product. Pricing policies and strategies. Distribution Channels and Physical Distribution: Channels of distribution - meaning and importance; Types of distribution channels; Factors affecting choice of distribution channel.

Unit 5: Promotion and Recent developments in marketing:

No. of classes: 8 / Marks: 8

Promotion: Nature and importance of promotion; Communication process; Types of promotion: advertising, personal selling, public relations & sales promotion, and their distinctive characteristics.

Recent developments in marketing: Social Marketing, online marketing, direct marketing, services marketing, green marketing, Rural marketing; Consumerism.

Suggested Readings:

- Kotler & Keller, Marketing Management, Pearson
- Ramaswamy and Namakumari, Marketing Management, McMillan
- Bhagwati, Pillai, Marketing Management, S.Chand
- Verma & Duggal, Marketing Management, Oxford
- Venugopal, P., Marketing Management, Sage
- Saxena, Marketing Management, McGraw Hill

Module II Human Resource Management

Internal Assessment:	10 marks
Semester-end Examinati	ons: 4 <u>0 marks</u>
Total	50 marks

Unit 1: Nature and Scope

No. of classes: 8 / Marks: 8

Concept and meaning of HR, Understanding the Nature and Scope of HRM, Functions and importance.

Unit 2: Human Resource Planning

No. of classes: 8 / Marks: 8

Definition, Need and Features of Human Resource Planning, factors affecting Human Resource Planning.

Unit 3: Recruitment and Selection No. of classes: 8 / Marks: 8

Definition of Recruitment, Source, need and importance of Recruitment, Recruitment Policy – process – sources of Recruitment Definition of Selection, Steps in selection.

Unit 4: Training and Development

No. of classes: 8 / Marks: 8

Training and Development Meaning and purpose of training, Benefits of training to organisation and employees -Training methods.

Unit 5: Job Evaluation and Performance Appraisal

No. of classes: 8 / Marks: 8

Job evaluation - objectives, scope, method, Job analysis, Job description, Job Specification - basic concept and significance,

Performance Appraisal - Concept

Suggested Readings:

- Mahajan, Reeta, Human Resource Management, Vikash
- Haldar & Sarkar, Human Resource Management, Oxford
- Sinha, Sekhar & Bala, Human Resource Management, Cengage
- Jyothi & Venkatesh, Human Resource Management, Oxford
- Wilton, N., An Introduction to Human Resource Management, Sage
- Dessler & Varkkey, Human Resource Management, Pearson

CC 2.1Ch COST AND MANAGEMENT ACCOUNTING – I

Marks 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit	Topic	Content	Marks	Lecture
1.	Introduction	 Definition of Costing, Objectives of Cost Accounting; Management Accounting and difference with Cost Accounting; Installing a Cost Accounting System, Essentials of a good Cost Accounting System. Cost concepts, terms and classification of costs: Cost, Cost object, Cost units and Cost Centres, Types 	10	6

		of costs, classification of costs- Direct-Indirect, Elementwise, Functionwise, Behaviourwise, Sunk Cost, opportunity Cost. Costing Methods and Techniques (introduction only).		
2	Material Costs	 Purchase of materials: Organisation, purchase procedure, documentation, determination of material purchase costs. Storage of materials: Need for storage, location and types, functions of a storekeeper, requisition, receipt, issue and transfer of materials, storage record, accounting for materials cost. Materials control: Organisation; Tools: Just-in-Time Purchase; various stock levels, Economic Ordering Quantity and ABC Analysis; Periodic Inventory, Perpetual Inventory, Physical verification; Discrepancies in stock and their treatment. Methods of Pricing Material Issues: FIFO, LIFO, and Weighted Average. Treatment of Normal and Abnormal Loss of Materials 	10	10
3	Employee Cost and Incentive Systems	 Introduction, Recording labour cost: Attendance and payroll procedures (Time-keeping, Time-Booking, Payroll procedure, Payment of wages-Piece rate, differential piece rate, time rate); Idle time (causes and treatment in Cost Accounting), Overtime (its effect and treatment in Cost Accounting), Labour turnover (Causes, impact and methods of calculating labour turnover). Main Principles for sound system of wage incentive schemeslabour utilisation; System of Wage Payment and Incentives(Halsey, Halsey-weir, Rowan and Emerson System of Incentive Schemes for Indirect Workers; Component of wages cost for costing purpose. 	10	12
4	Overhead and Cost Statement	 Overhead Introduction: Definition, Classification of Overhead-Functional and Behavioural. Manufacturing Overheads: Allocation and apportionment of Overhead; Absorption of Overhead: various methods and their application; Treatment of under absorption/over absorption of overheads. Administration and Selling & Distribution Overheads and their charging: an introduction only Preparation of Cost Sheet and estimation 	20	20
5	Cost Book- keeping	 Cost Book-keeping Non-Integrated System: Meaning & Features; Ledgers Maintained; Accounts prepared; General/Cost Ledger Adjustment Account; Meaning of Closing Balance in Various Accounts; Disadvantages. Reconciliation: Need for reconciliation; Items causing differences between Cost and Financial Profits and their reconciliation. 	10	8

6	Costing Methods	 Job Costing (Job cost cards and databases, Collecting direct costs of each job, Attributing overhead costs to jobs, Applications of job costing). Batch Costing Contract Costing - Progress payments, Retention money, Escalation clause, Contract accounts, Accounting for material, Accounting for plant used in a contract, Contract Profit and Balance sheet entries. Service Costing and Output Costing- Introduction; Motor Transport Costing only Process Costing: Meaning, Features, Process vs Job Costing, Principles of cost ascertainment for Materials, Labour & Overhead; Normal loss, Abnormal loss and gain and preparation of process accounts. Inter-process profit (simple cases). Valuation of WIP and Equivalent units (excluding intermediary process). 	20	24
			80	80

Suggested Readings

- Horngren, Datar & Rajan, Cost Accounting,- A Managerial Emphasis, Pearson
- B.Banerjee, Cost Accounting, PHI •
- Jawahar Lal & Seema Srivastava, Cost Accounting, TMH
- M.Y.Khan & P.K.Jain, Management Accounting, TMH •
- Atkinson, Management Accounting, Pearson •
- Bhattacharyya, Ashish K., Cost Accounting for Business Manageres, Elsevier •
- Ravi M Kishore, Cost and management Accounting, Taxmann •
- Mitra, J.K., Cost & Management Accounting, Oxford
- Hanif, M., Cost & Management Accounting, McGraw Hill
- Drury, Colin., Management and Cost Accounting, Cengage •
- Satish Inamdar, Cost & Management Accounting, Everest Publishing House •
- Bhattacharyya, Ashish K., Cost Accounting for Business Manageres, Elsevier •
- Ravi M Kishore, Cost and management Accounting, Taxmann •

		Marks	Credit Hours	
SEC 3.1 Chg	Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100	4	
GE 3.3 Chg	Business Mathematics & Statistics	100	6	
CC3.1 Ch	Financial Accounting II	100	6	
CC3.2 Ch	Indian Financial System	100	6	
			27	

Year 2: Semester III
SEC 3.1 Chg Information Technology & Its Application in Business (Theory -50 + Practical- 50) **Internal Assessment:** 20 marks **Semester-end Examinations: 80 marks** Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I **Information Technology and Its Application in Business (Theory)** (Marks: 50) **Internal Assessment:** 10 marks **Semester-end Examinations: 40 marks** 50 marks Total

Unit1: Information Technology and Business

Concepts of data, information and computer based information system, impact of information technology on business [business data processing, intra-organizational and inter-organizational communication by using network technology, business process outsourcing and knowledge process outsourcing], types of Information System- Transaction Processing System (TPS), Management Information System (MIS), Decision Support System (DSS), Knowledge Management System (KMS) and their implementation at managerial levels [operational, tactical and strategic].

Unit 2: Data Organization and Data Base Management System [10 Marks, Class: 10]

(a) Data Organisation: Character, field, record, file and database, types of data processing systems [Serial, Batch, Real-time, Online, Centralized, Distributed], File Organizations [Sequential, Direct, Indexed-Sequential, Relative], Traditional file organisation vs. Database file organisation.

(b) Database Management System: Concept of database management system (DBMS), definition, importance of DBMS, important terms of database [Entity, Attribute, Keys- Primary, Foreign and Candidate, Referential Integrity, Table, Views, Data Dictionary], types of database [Hierarchical, Network and Relational], basic ideas of Data Warehouse and Data Mining (definition, importance, advantages and disadvantages), Big data analysis- Concept.

Unit 3: Internet and Its Applications

Meaning of Internet, IPAddress [IPv4, IPv6], URL, Domain Name System, Internet Protocols -TCP/IP, UDP, FTP, TELNET[brief ideas only], HTML, DHTML AND XML [Concepts only], Ethical Hacking, Cloud Computing, Mobile Computing, Internet of Things, Ethical issues in Social Networking.

Unit 4: Security and Encryption

Need and concepts, dimension, definition and scope of e-security, security threats- Malicious Codes (Virus, Trozan Horse, Worm, Spyware, Ransomware), Hacking, Spoofing, Sniffing, Phishing, Spamming, Denial of Service (DoS) attacks, Technology solutions [Confidentiality: (Data Encryption & Decryption, Symmetric and asymmetric encryption), Security Implementation: Firewall, DMZ (De Militarized Zone), SSL, HTTPs, Significance of Website Auditing].

[8 Marks, Class: 8]

[8 Marks, Class: 8]

[8 Marks, Class: 8]

Unit 5: IT Act. 2000 and Cyber Crimes

IT Act 2000- Definitions of different terms, Digital signature, Electronic Governance, Attribution, Acknowledgement and Dispatch of Electronic Records, Regulation of Certifying Authorities, Digital Signatures Certificates, Duties of Subscribers, Penalties and Adjudication, Appellate Tribunal, Offences and Cyber-crimes.

Module II **Information Technology and Its Application in Business (Practical)**

(Marks: 50) **Internal Assessment:** 10 marks Semester-end Examinations: 40 marks 50 marks Total

Unit 1: Word Processing

Working with word document- Editing text, Find and Replace text, Formatting, Spell check, Autocorrect, Auto text; Bullets and numbering, Tabs, Paragraph Formatting, Indent, Page Formatting, Header and footer, Macros, Drop cap; Tables: Inserting, Filling and formatting a Table, Inserting Pictures and Video; Mail Merge- including linking with Database, Printing documents.

Creating Business Documents using the above facilities

Unit 2: Preparing Presentations

Basics of presentations: Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols, Media; Design; Transition; Animation, Hyperlink and Slideshow.

Creating Business Presentations using above facilities.

Unit 3: Spreadsheet and its Business Applications

Managing worksheets- Formatting, Entering data, Editing, and Printing a worksheet; Handling operators in formula, Project involving multiple spreadsheets, Organizing Charts and graphs, Pivot Table.

Spreadsheet Functions: Mathematical [SUMIF, SQRT, SUBTOTAL, SUMPRODUCT etc.], Statistical [AVERAGE, STDEV, VAR, CORRELATION, REGRESSION etc.], Financial [PMT, RATE, PV, FV, NPER, IRR, NPV, Data Table Etc.] Logical [AND, OR, IF etc.], Date and Time, lookup and reference, Database and Text functions.

Creating Spreadsheet in the area of: Loan and Lease statement; Ratio Analysis; Payroll Statements; Capital Budgeting; Depreciation Accounting; Graphical Representation of Data; Frequency Distribution and its Statistical Parameters; Correlation and Regression

Unit 4: Database Management System

Creation of Tables, Multiple Table Handling-Defining Relationship [Foreign Key], Simple and Conditional Queries, Types of Queries [Update, Delete, Append], Forms, Reports, Introduction to SQL through Basic Commands.

Applying DBMS in the areas of Accounting, Inventory, HRM and its accounting, Managing the data records of Employees, Suppliers and Customers.

[6 Marks, Class: 6]

[5 Marks, Class: 5]

[5 Marks, Class: 5]

[16Marks, Class: 16]

[8 Marks, Class: 8]

Unit 5: Website Designing

Introduction to HTML; Tags and Attributes: Text Formatting, Fonts, Hypertext Links, Tables, Images, Lists, Forms, Frames, Cascading Style Sheets.

Suggested Readings

- Thareja, IT & Application, Oxford
- Aurora, Computer Fundamentals, Vikash
- Sinha & Sinha, Fundamentals of Computers, BPB Publications
- Dhar, P., Fundamental of IT and Its Application in Business, APH

GE 3.3 Chg Business Mathematics & Statistics Marks 100

Module I Business Mathematics Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

- Permutations and Combinations: Definition, Factorial Notation, Theorems on Permutation, Permutations with repetitions, Restricted Permutations; Theorems on Combination, Basic identities, Restricted Combinations. [8 L /8Marks]
- 2 **Set Theory**: Definition of set, Presentation of sets, Different types of sets- Null set, Finite and infinite Sets, Universal set, Subset, Power set etc.; Set Operations, Law of algebra of Sets.

[8 L /8Marks]

- Binomial Theorem: Statement of the theorem for positive integral index, General term, Middle term, Simple properties of binomial coefficients. [8 L /8Marks]
- 4 Logarithm: Definition, Base and Index of Logarithm, General properties of Logarithm, Common Problems. [8 L /8Marks]
- Compound Interest and Annuities:Simple AP and GP Series, Different types of interest rates, Net present value, Types of annuities, Continuous compounding, Valuation of simple loans and debentures, Problems relating to Sinking Funds. [8 L /8Marks]

Module II Statistics

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

6. Correlation and Association:Bivariate data, Scatter diagram, Pearson's correlationcoefficient, Spearman's rank correlation, Measures of association of attributes.

[6 Marks, Class: 6]

[8 L /8Marks]

- 7. Regression Analysis: Least squares method, Simple regression lines, properties of regression, Identification of regression lines. [8 L /8Marks]
- **8. Index Numbers:** Meaning and types of index numbers, Problems of constructing index numbers, Construction of price and quantity indices, Test of adequacy, errors in index numbers, Chain base index numbers; Base shifting, Splicing, Deflating, Consumer price index and its uses.

[8 L /8Marks]

- 9. Time Series Analysis: Causes of variation in time series data, Components of time series, additive and multiplicative models, Determination of trend by semi-average, moving average and least squares(of linear, quadratic and exponential trend) methods; Computation of seasonal Indices by simple average, ratio-to-moving average, ratio-to-trend and link relative methods; Simple forecasting through time series data. [8 L /8Marks]
- **10.** Probability Theory: Meaning of probability; Different definitions of probability; Conditional probability; Compound probability; Independent events, Simple problems.

[8 L /8Marks]

Suggested Readings

- Business Mathematics and Statistics- N G Das & J K Das (Tata McGraw Hill)
- Statistics for Business Decisions J. K .Das (Academic Publishers)
- Basic Mathematics and its Application in Economics S. Baruah (Macmillan)
- Mathematics for Economics and Business R. S. Bhardwaj (Excel Books)
- Mathematics and Statistics for Management K B Akhilesh and S Balasubrahmanyam (Vikash Publishing House Pvt.Ltd.)
- Business Statistics G. C. Beri (Tata McGraw Hill)
- Fundamentals of Statistics S.C.Gupta (Himalaya Publishing House)
- Statistics for Business and Economics D. R. Anderson, D. J. Sweeney and T. A.
- Williams (Thomson Asia Pvt Ltd)
- Text Book of Business Mathematics , Padmalochan Hazarika, S.Chand
- Business Mathematics, Jameeruddin, Khanna & Bhamdri, Vikash
- Business Mathematics & Statistics J. Chakraborti (Dey Book Concern)
- Business Mathematics & Statistics R K Ghosh & S Saha (New Central Book Agency(P) Ltd
- Rajaretnam, Statistics for Social Sciences, Sage
- Elementary Business Mathematics & Statistics Dr. Priyotosh Khan (Elegant Publication)
- Business Mathematics & Statistics Dr. S N De (Chhaya Prakashani)
- Business Mathematics & Statistics N K Nag & S K Nag (Kalyani Publishers)
- Business Mathematics & Statistics Dr. Ranjit Dhar (Dishari Prakashani)

CC3.1Ch: FINANCIAL ACCOUNTING – II Marks 100 Internal Assessment: 20 marks

Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

FINANCIAL ACCOUNTING - II

Unit	Topic	Details		No. of
			anoued	lectures
1	Partnership accounts-I	Correction of appropriation items with retrospective effect. Change in constitution of firm – change in P/S ratio, admission, retirement and retirement cum admission – treatment of Goodwill, revaluation of assets & liabilities (with/without alteration of books), treatment of reserve and adjustment relating to capital; treatment of Joint Life Policy, Death of a partner	15	15
2	Partnership accounts-II	Accounting for dissolution of firm – insolvency of one or more partner, consideration of private estate and private liabilities. Piecemeal distribution – surplus capital basis; maximum possible loss basis.	15	15
3	Branch accounting	Concept of Branch; different types of Branches. Synthetic method – preparation of Branch account. Preparation of Branch Trading and P/L account. (at cost & at IP) – normal and abnormal losses. Analytical method – preparation of Branch Stock, Adjustment etc A/C (at cost & at IP) – normal & abnormal losses Independent branch – concept of wholesale profit	10	10
4	Hire purchase and Instalment payment system	 Meaning; difference with Installment payment system; Recording of transaction in the books of buyer – allocation of interest – use of Interest Suspense a/c – partial and complete repossession Books of Seller – Stock and Debtors A/C (with repossession) Books of Seller – H.P. Trading A/C without HP Sales and HP Debtors and General Trading A/c (with repossession) Concept of operating and financial lease – basic concept only. 	10	10

5	Departmental accounts	Concept, objective of preparation of departmental accounts; apportionment of common cost; Preparation of Departmental Trading and P/L account, Consolidated Trading and P/L account; inter departmental transfer of goods at cost, cost plus and at selling price and elimination of unrealized profit.	10	10
6	Investment Accounts	Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.	10	10
7	Business Acquisition and Conversion of partnership into limited company	 Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company – with and without same set of books 	10	10
			80	80

Relevant Accounting Standards issued by the Institute of Chartered Accountants of India are to be followed.

Suggested Reading

- Sukla, Grewal, Gupta: Advanced Accountancy Vol. I & II, S Chand
- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. I & II, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. I & II, Vikash Publishing House Pvt. Ltd.
- Sehgal & Sehgal, Advanced Accountancy Vol. I & II, Taxman Publication
- L.S.Porwal, Accounting Theory, Tata Mcgraw Hill
- Gokul Sinha, Accounting Theory & Management Accounting,
- B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
- Frank Wood, Business Accounting Vol 1&II, Pearson
- Tulsian, Financial Accounting, Pearson
- Hanif & Mukherjee, Financial Accounting, Vol II, McGraw Hill
- Accounting Standards issued by ICAI

CC3.2 Ch

Indian Financial System

Full Marks:100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit:I Financial System and Its Components

Meaning, Significance and Role of the Financial System; Components of the Financial System; The structure of Indian Financial System.

Unit:II Financial Markets

(a) Money Market: Functions and Instruments; Role of Central Bank; Indian Money Market: An Overview, Call Money Market, Treasury Bills Market, Commercial Paper (CP) Market, Certificate of Deposit (CD) Market; Concepts- Repo, Reverse Repo; Recent trends in the Indian money market.

[L-10/Marks 10]

(b) Capital Market: Functions and Instruments; Primary and Secondary Markets- Functions and inter-relationship, Methods of New Issues; Indian debt market and equity market; Market Intermediaries- Brokers, Sub-Brokers; Role of Stock Exchanges in India; Recent trends in the Indian capital market.

Unit: III Financial Institutions

Commercial banking: Functions of Commercial Banks, Credit creation by commercial banks and its limitations; Reserve bank of India: Functions, Credit Control and Monetary Policy; Development Financial Institutions in India: NABARD, EXIM Bank, SIDBI; Life Insurance and General Insurance Companies in India: Functions; Mutual Funds: Concept of Mutual Fund, Types of Mutual Funds(open ended and close ended); Role of Mutual Funds in Indian capital market; Non-Banking Financial Companies (NBFCs):Definition, Functions, Regulations of RBI over NBFCs. **[L-20/Marks:20]**

Unit: IV Financial Services

Merchant Banks: Functions and Role, SEBI Regulations; Credit Rating: Objectives and Limitations, SEBI Regulations; Credit Rating Institutions and their functions. [L-10/Marks:10]

Unit: V Investors' Protection

Concept of investors' protection; Grievances regarding new issue market and Stock Exchange transactions, and the Grievance Redressal Mechanism; Role of SEBI, judiciary and the media.

[L-10/Marks:10]

Suggested Readings

- Khan, M. Y., Indian Financial System-Theory and Practice, TMH
- Bhole, L. M., Financial Markets and Institutions, TMH
- Majumder S., Indian Financial System
- Nayak and Sana, Indian Financial System, Rabindra Library
- Basu, A, Mazumdar, D, Datta S., Indian Financial System, ABS

[L-20/Marks:20]

[L-10/Marks:10]

• Gurusamy, Financial Services, TMH

- Pathak, B., Indian Financial System, Pearson
- Bhattacharyya S., Indian Financial System, Oxford University Press
- Saha, S.S., Indian Financial System and Markets, McGraw Hill
- Saha, S.S., Capital Markets and Securities Law, Taxmann

Year 2: Semester IV

		Marks	Credit Hours	
GE 4.1 Chg	Microconomics I & Indian Economy (50+50)	100	6	
CC 4.1 Chg	Entrepreneurship Development and Business Ethics	100	6	
CC 4.1 Ch	Taxation I	100	6	
CC 4.2 Ch	Cost and Management Accounting -II	100	6	

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GE 4.1 Chg Microeconomics-II & Indian Economy (50+50) Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I Microeconomics-II Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit: I Monopoly

Concept of Monopoly: Sources of monopoly power; Short-run and Long-run equilibrium of a monopoly firm; Price discrimination; Social Cost of Monopoly (concept only).

[L-10/Marks:10]

Unit: II Imperfect Competition

Concept of Imperfectly Competitive market; Monopolistic Competition: Features and examples; Oligopoly: Non-Collusive Oligopoly: Sweezy's Kinked demand Curve Model, Collusive Oligopoly: Cartel (concept with example) [L-15/Marks:15]

Unit: III Factor Price Determination

Introduction; Marginal Productivity Theory of Distribution; Marginal Productivity Theory of Wage, Demand Curve of Labour, Supply Curve of Labour; Wage Determination in an Imperfectly Competitive Labour Market: Case of Collective Bargaining, Factors determining the power of trade unions to raise wages; Theory of Rent: Ricardian Theory of Rent, Modern Theory of Rent, Quasi-rent; Theory of Profit: Gross Profit and Net Profit, Accounting Profit and Normal Profit, Different Theories of Determination of Profit; Concept of Interest: Gross Interest and Net Interest, Classic Theory of Interest Rate Determination.

[L-15/Marks 15]

Suggested Readings

- Pindyke and Rubinfeld, Micro Economics, Pearson
- Gold & Ferguson, Micro Economic Theory
- Banerjee & Majumdar, Business Economics and Business Environment, ABS
- Banerjee & Majumdar, Banijjik Arthaniti -o- Banijjik Paribesh(Bengali), ABS
- Ratan Khasnabish & Ranesh Roy, Banijjik Arthaniti -o- Bharoter arthanaitik Paribesh(Bengali)
 - Divedi, D.N., Managerial Economics, Vikash Publications
 - Mankiw.N.G., Principles of Microeconomics, Cengage
 - Das, P. & Sengupta A., Economics , Oxford
 - Samuelson & Nordhaus, Macroeconomics, McGraw Hill

Module II Indian Economy

Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit:I Basic Issues in Economic Development

Concepts and measures of development and underdevelopment; Concept of national income: GDP,GNP,NDP,NNP,NI (concepts only). [L 5/ Marks:5]

Unit:II Basic Features of Indian Economy

Sectoral distribution of National Income and Occupational Structure; Structural Change in Indian Economy, issue of Service-led Growth. [L 10/ Marks:10]

Unit:III Sectoral Trends and Issues

(a) **Agricultural Sector**: Problem of low productivity; Green Revolution and its impact; Land Reforms; Problems of rural credit and marketing.

(b) **Industry and Service Sector**: An overview of industrial growth during pre-reform and post-reform

period; Role of Public Sector: its performance and the issue of disinvestment; Role of MSME sector, problems faced by the MSME Sector; Role of the Service Sector: growth of banking and insurance sector during the post-reform period.

(c) External Sector: Problem of unfavourable balance of payments and policy measures.

[L 15/ Marks:15]

Unit:IV Social Issues in Indian Economy

Problem of Poverty, Poverty alleviation measures; Problem of Unemployment and the policy measures.

[L 10/ Marks:10]

Suggested Readings

•Dutt & Sundaram, Indian Economy, S.Chand

- Mishra & Puri, Indian Economy, Himalaya Publishing House
- Uma Kapila, Indian Economy
- Joydeb Sarkhel & Swapan Kr. Roy, Bharoter arthanaiti(Bengali)
- Banerjee & Majumdar, Business Economics and Business Environment, ABS
- Banerjee & Majumdar, Banijjik Arthaniti -o- Banijjik Paribesh(Bengali), ABS
- Ratan Khasnabish & Ranesh Roy, Banijjik Arthaniti -o- Bharoter arthanaitik Paribesh(Bengali)
 - Prakash, B.A., Indian Economy, Pearson
 - Fernando, Indian Economy, Pearson

CC 4.1 Chg Entrepreneurship Development and Business Ethics Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module IEntrepreneurship DevelopmentInternal Assessment:10 marksSemester-end Examinations:<u>40 marks</u>Total50 marks

Unit-1: Introduction: No. of classes: 10 / Marks: 10

Meaning, elements, determinants and importance of entrepreneurship and creative behavior; Entrepreneurship and Micro, Small and Medium Enterprises, Role of family business in India; The contemporary role models in Indian business: their values, business philosophy and behavioural orientations; Conflict in family business and its resolution.

Unit-2:

No. of classes: 10 / Marks: 10

Public and private system of stimulation, support and sustainability of entrepreneurship. Requirement, availability and access to finance, marketing assistance, technology, and industrial accommodation, Role of industries/entrepreneur's associations and self-help groups, The concept, role and functions of business incubators, angel investors, venture capital and private equity fund.

Unit-3:

No. of classes: 10 / Marks: 10

Sources of business ideas and tests of feasibility. Significance of writing the business plan/ project proposal; Contents of business plan/ project proposal; Designing business processes, location, layout, operation, planning & control; preparation of project report

Unit-4:

No. of classes: 10 / Marks: 10

Mobilizing Resources - Mobilizing resources for start-up. Accommodation and utilities; Preliminary contracts with the vendors, suppliers, bankers, principal customers; Basic start-up problems;

Module II Business Ethics Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit 1: Business Ethics

No. of classes: 8 / Marks: 8

Introduction – Meaning - Scope – Types of Ethics – features – Factors influencing Business Ethics – significance of Business Ethics - Arguments for and against business ethics- Basics of business ethics - Corporate Social Responsibility and Business Ethics

Unit 2: Principles of Business Ethics

No. of classes: 8 / Marks: 8

Introduction – Meaning – Element – Ethics, Morale, Business ethics, Ethical dilemma [basic idea, features and significance of each of element]

Unit 3: Ethics in Management

No. of classes: 8 / Marks: 8

Introduction – Ethics in HRM – Ethics in Marketing — Ethics in Accounting and finance - Work place Ethics - Value and Ethics.

Unit 4: Corporate Culture

No. of classes: 8 / Marks: 8

Meaning – Role – Functions – Impact of Corporate Culture – Globalization and cross culture issues in ethics, Corporate Code of ethics

Unit 5: Ethics & Corporate Governance

No. of classes: 8 / Marks: 8

Concept of Corporate Governance, Scope, Reports on Corporate Governance and its benefits and limitations-- Corporate Governance and Business Ethics [Brief Concept]

Suggested Readings:

- Kuratko and Rao, Entrepreneurship: A South Asian Perspective, Cengage Learning.
- Robert Hisrich, Michael Peters, Dean Shepherd, Entrepreneurship, McGraw-Hill Education
- Desai, Vasant. Dynamics of Entrepreneurial Development and Management. Mumbai,
- Himalaya Publishing House.
- Dollinger, Mare J. Entrepreneurship: Strategies and Resources. Illinois, Irwin.
- Holt, David H. Entrepreneurship: New Venture Creation. Prentice-Hall of India, New Delhi.
- Plsek, Paul E. Creativity, Innovation and Quality. (Eastern Economic Edition), New Delhi:
- Prentice-Hall of India. ISBN-81-203-1690-8.
- Singh, Nagendra P. Emerging Trends in Entrepreneurship Development. New Delhi:
- ASEED.
- SS Khanka, Entrepreneurial Development, S. Chand & Co, Delhi.
- Hifrich, Manimala, Peters & Shepherd, Entrepreneurship, McGraw-Hill
- Kumar Arya, Entrepreneurship, Pearson
- Bamford and Bruton, Entrepreneurship, McGraw Hill
- SIDBI Reports on Small Scale Industries Sector.
- Roy, Entrepreneurship, Oxford
- Albuquerque, Business Ethics, Oxford
- Ferrell, Fraedrich, Farrell, Business Ethics, Cengage

Note: Latest edition of text books may be used.

CC 4.1 Ch

TAXATION-I

Full Marks - 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1 :

: a) Basic Concepts and Definitions under IT Act

Assessee, Previous year, Assessment year, Person, Income, Sources of income, Heads of income, Gross total income, Total income, Maximum marginal rate of tax, Tax Evasion, Tax avoidance, Tax planning.

- b) Residential Status and Incidence of Tax Residential status of all persons except company
- c) Incomes which do not form part of Total Income Except section 10AA.

d) **Agricultural Income**

Definition, determination of agricultural and non-agricultural Income, assessment of tax liability when there are both agricultural and non-agricultural income

(L-10 / M-10)

Unit 2 : Heads of Income and Provisions governing Heads of Income

Salaries a)

b)

Unit 4 :

Income from House property (L-30 / M-30)

Unit 3 : Heads of Income and Provisions governing Heads of Income

- Profits and Gains of Business and Profession a) Special emphasis on sec. 32, 32AC, 32AD, 35, 35D, 36(i)(ib), (ii), (iii), (iv), (vii), 37, 37(2B), 40A(2), 40A(3), 43B, (Excluding presumptive taxation) b)
 - Capital Gains Meaning and types of capital assets, basic concept of transfer, cost of acquisition, cost of improvement and indexation, computation of STCG and LTCG, exemptions u/s 54, 54B, 54EC and 54F, capital gain on transfer of bonus shares, right entitlement and right shares, taxability of STCG and LTCG.
- Income from Other Sources c) Basis of charge excluding deemed dividend (L-25 / M-25)
- Income of other Persons included in Assessee's Total Income a) Remuneration of spouse, income from assets transferred to spouse and Son's wife, income of minor.
- b) Set off and Carry Forward of Losses Mode of set off and carry forward, inter source and inter head set off, carry forward and set off of losses u/s 71B, 72, 73, 74, 74A.
- **Deductions from Gross Total Income** c) Basic concepts, deductions u/s 80C, 80CCC, 80CCD, 80CCE, 80D, 80DD, 80DDB, 80E, 80G, 80GG, 80GGC, 80TTA, 80U (L-15 M-15) d)
 - Rebate u/s 87A

If any new legislations/provisions are enacted in place of the existing legislations/provisions, the syllabus will accordingly include such new legislations/provisions in place of existing legislations/provisions with effect from such date as prescribed by CALCUTTA UNIVERSITY. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus.

Suggested Readings

- Singhnia V.K., and Singhania K, Direct Tax Law and Practice, Taxmann
- Lal and Vashist, Direct Taxes, Pearson
- Ahuja and Gupta, Direct Taxes Law And Practice, Bharat
- Manoharan & Hari, Direct Tax Laws, Snow White •
- Roy, S. K., Principles and Practice of Direct & Indirect Taxes, ABS
- Sengupta, C.H., Direct & Indirect Taxes, Dey Book Concern

Latest edition of the books may be read.

CC 4.2 Ch **Cost and Management Accounting -II** Full Marks - 100 20 marks **Internal Assessment: Semester-end Examinations: 80 marks** 100 marks Total

Unit	Торіс	Content	Marks	Hours
	Joint Product & By product	Meaning, treatment and apportionment of cost; decision relating further processing		
1	Activity Based Costing	Problems of traditional costing; meaning of Activity Based Costing; cost analysis under ABC; application of ABC (Simple problems)	20	18
2	Budget and Budgetary Control	Budget and Budgetary Control; The budget manual, principal budget factor, preparation and monitoring procedures, Fixed and Flexible budget, preparation of functional budgets – concepts, cash budget, flexible budget.	10	12
3	Standard Costing	Standard Costs and Standard Costing; Uses, & Importance. Differences with Budgetary Control, Preliminary Steps. Classification of Standards. Analysis and computation of Materials, Labour and Overhead Costs (concepts only) Variances	20	20
4	CVP Analysis, Marginal Costing	 CVP Analysis Introduction; CVP Assumptions and Uses; Break-Even Analysis: BE Point and Margin of Safety; Graphical presentation of CVP Relationship; Profit Graph Marginal Costing and Management Decisions – Marginal Costing vis-à-vis Absorption Costing; Cost statement under marginal costing and absorption costing; Marginal Costing Techniques. 	20	15
5	Short-term Decision Making	Marginal Cost and decision relating Product Pricing; Product Mix; Make or Buy; Choosing among alternatives and closing down or suspending an activity. (with simple type of problems)	10	15
		Total	80	80

Marks shown against the units indicate marks for Semester-end Examinations

Suggested Readings

- Horngren, Foster & Rajan, Cost Accounting,- A Managerial Emphasis, Pearson
- B.Banerjee, Cost Accounting, PHI
- Jawahar Lal & Seema Srivastava, Cost Accounting, TMH
- M.Y.Khan & P.K.Jain, Management Accounting, TMH
- Atkinson, Management Accounting, Pearson
- Bhattacharyya, Ashish K., Cost Accounting for Business Manageres, Elsevier
- Ravi M Kishore, Cost and management Accounting, Taxmann
- Hanif, M., Cost and Managment Accounting, TMH
- Mitra, J.K., Cost and Management Accounting, Oxford
- Drury, C., Management and Cost Accounting, Cengage

Year 3: Semester V

		Marks	Credit Hours	
CC 5.1Ch	Auditing & Assurance	100	6	
CC 5.2 Ch	Taxation II	100	6	
DSE 5.1 A*	Economics II and Advanced Business Mathematics	100	6	
DSE 5.2 A*	Corporate Accounting	100	6	

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CC 5.1Ch **Auditing & Assurance** Full Marks - 100 **Internal Assessment:** 20 marks Semester-end Examinations: 80 marks

Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

UNIT - I CONCEPT, NEED AND PURPOSE OF AUDIT

- Definition-Nature-Scope and Objectives of Independent Financial Audit
- > Basic Principles Governing an Audit, Concept of Auditor's Independence
- > Errors and Fraud-Concepts, Means of doing Fraud, Auditor's Responsibility towards Detection and Prevention of Fraud, Difference between Audit and Investigation
- Classification of Audit- Organization Structure wise (Statutory, Non-statutory); Objective wise (Internal and Independent Financial Audit); Periodicity wise (Periodical, Continuous, Interim, Final); Technique wise (Balance Sheet, Standard, Systems, EDP);
- Standards on Auditing (SA)- Concept and Purpose

(This unit should be studied with SA 200[REVISED] and SA 240[REVISED])

UNIT – II AUDIT PROCEDURES AND TECHNIQUES

- Auditing Engagement-Audit Planning- Audit Programme (Concept)
- > Documentation: Audit Working Paper, Ownership and Custody of Working Papers-Audit file (Permanent and Current) - Audit Note Book- Audit Memorandum.
- > Audit Evidence Concept, Need, Procedures to obtain Audit Evidence
- Routine Checking, Test Checking and Auditing in Depth
- Concept of Analytical Procedure and Substantive Testing in Auditing.
- > Audit of Educational Institutions, Hospitals and Hotels

(This unit should be studied with SA 210, SA 230, SA 300, SA 500, SA 520 and SA 530)

UNIT – III AUDIT RISK AND INTERNAL CONTROL SYSTEM

- Audit Risk Concept and Types only.
- Internal Control- Definition, Objectives
- Internal Check- Definition, Objectives
- > Internal Audit- Definition, Objectives, Regulatory Requirement, Reliance by Statutory Auditor on Internal Auditor's Work

(This unit should be studied with SA 610)

(15M 15L)

(**10M**

10L)

10L)

(10M)

UNIT – IV VOUCHING, VERIFICATION AND VALUATION

- > Vouching: Meaning, Objectives Difference with Routine Checking Factors to be Considered during Vouching - Vouching of Following Items: i) Receipts: Cash Sale, Collection from Debtors, Interest and Dividend from Investment, Sale of Fixed Assets. ii) Payments: Cash Purchase, Payment to Creditors, Payment of Wages and Salaries, Advertisement Expenses, Travelling Expenses, Research and Development Expenditure, Prepaid Expenses.
- > Verification and Valuation: Concept, Objectives, Importance, Difference with Vouching, Difference between Verification and Valuation, Verification of following items: i) Non-Current Assets: Goodwill, Patent and Copy Right, Leasehold Land, Plant and Machinery, ii) **Investments iii)** Current Assets: Inventory, Loan and Advance, Cash and Bank Balances iv) Non-current Liability: Secured Loan v) Current Liability: Trade Payables (Sundry Creditors).

UNIT - V **COMPANY AUDIT**

- > Qualification, Disqualification, Appointment and Rotation, Removal and Resignation, Remuneration, Rights, Duties and Liabilities of Company Auditor
- Branch Audit and Joint Audit
- Depreciation Concept and Provisions of the Companies Act
- > Divisible Profit and Dividend (Final, Interim and Unclaimed/Unpaid): Provisions of the Act, Legal Decisions and Auditor's Responsibility

UNIT – VI AUDIT REPORT AND CERTIFICATE

- Definition Distinction between Report and Certificate- Different Types of Report
- Contents of Audit Report (As per Companies Act and Standards on Auditing)
- True and Fair View Concept
- ➤ Materiality Concept and Relevance

(This unit should be studied with SA 700)

UNIT – VII OTHER THRUST AREAS

- Cost Audit Concepts, Objectives Relevant Provisions of Companies Act
- Management Audit Concepts, Objectives, Advantages
- Tax Audit Concepts, Objectives, Legal Provisions
- Social Audit Propriety Audit Performance Audit Environment Audit (Concepts only)

Notes:

- 1) The provisions of the Companies Act, 1956 which are still in force would form part of the syllabus till the time their corresponding or new provisions of the Companies Act, 2013 are enforced.
- 2) If new Laws or Rules are enacted in place of the existing laws and rules, the syllabus would include the corresponding provisions of such new laws and rules with immediately following Academic Year.
- 3) Students are expected to develop analytical mind for answering problem based questions along with the theoretical questions.

Suggested Readings:

- Tandon et al, Practical Auditing, S.Chand
- Gupta & Arora, Fundamentals of Auditing, TMH
- Jha, A., Auditing, Taxmann
- Basu, S. K., Auditing and Assurance, Pearson
- Ghosh, J., Contemporary Auditing and Assurance, Elegant Publishing
- Standards on Audit (SA) issued by the Institute of Chartered Accountants of India •

(10M 10L)

(10M 10L)

(15M 15L)

(10M 10L)

CC 5.2 Ch TAXATION-II Full Marks – 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I Direct Tax

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Rate of tax applicable to different assesses (except corporate assessee)

Computation of Total Income and Tax Payable

	b)	Computation of tax liability of an individual, Firm (excluding application of
		AMT) (L-15 / M-15)
Unit 2 :	ТАХ	MANAGEMENT
	a)	Provision for Filing of Return
		Date of filing of return, relevant forms of return, different types of returns,
		return by whom to be signed, PAN, TAN
	b)	Assessment of Return
		Self assessment u/s140A, Summary assessment u/s 143(1), Scrutiny assessment
		u/s 143(3) and Best judgement assessment u/s 144.
	c)	Advance Tax
		Who is liable to pay, due dates and computation of advance tax (excluding corporate assessees)
	d)	Interest & Fees
		Section 234A, 234B, 234C, 234F (simple problems on interest and fees)
	e)	TDS

Provisions regarding TDS from salary, interest on securities, horse racing, lottery. (L-25 / M-25)

Module II INDIRECT TAXES Internal Assessment: 10 marks Semester-end Examinations: <u>40 marks</u> Total 50 marks

Unit 3 : Central Sales Tax

Unit 1 :

a)

Definitions, incidence and levy of tax, exemptions and exclusions, forms under CST, determination of turnover and tax payable, registration of dealers.

(L-8 / M-10)

Unit 4 : West Bengal Value Added Tax

Concepts and general principles, features, advantages and disadvantages, definitions, incidence and levy of tax, Rates of VAT, Calculation of VAT liability, Input tax credit (including on Capital goods), small dealers and composition scheme, registration of

dealers, cancellation of registration certificate.

(L-12 / M-10)

Unit 5 : Central Excise

Basic concepts, conditions and taxable event for levy of excise duty, Goods and excisable goods, Manufacture and deemed manufacture, Definitions of factory, broker or commission agent, wholesale dealer, sale or purchase, valuation – MRP, transaction value. (L-12 / M-10)

Unit 6 : Customs

Basic concepts, Taxable event, Territorial water, Indian customs water, Goods, Types of Customs duties – Basic, Additional, Protective, Safeguard, Counter-veiling duty on subsidised goods, Anti Dumping, Valuation of Custom Duty. (L-8 / M-10)

The indirect tax portion of this paper will be replaced by the Goods & Service Tax Law whenever the law is enforced and accordingly revised syllabus will be announced. If any new legislations/provisions are enacted in place of the existing legislations/provisions, the syllabus will accordingly include such new legislations/provisions in place of existing legislations/provisions with effect from such date as prescribed by CALCUTTA UNIVERSITY. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus.

Suggested Readings

- Datey V.S., Indirect Taxes Law And Practice, Taxmann
- Sanjeev Kumar, Systematic Approach to Indirect Taxes, Bharat
- Bangar and Bangar, Students' Gide to Indirect Taxes, Aadhya Prakashan.
- Sengupta, C.H., Direct & Indirect Taxes, Dey Book Concern
- Roy, S. K., Principles and Practice of Direct & Indirect Taxes, ABS

Latest edition of the books may be read.

DSE 5.1 A

Macroeconomics and Advanced Business Mathematics (50+50)

Full Marks - 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I

Macroeconomics

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit – I:Introduction

Concepts and variables of Macroeconomics.

[L 2 / Marks:2]

Unit – II: National Income Accounting

Concepts and measurement of National Income (numerical examples preferred); Circular flow of income – Real and Nominal GDP –Implicit deflator. [L 6 / Marks:6]

Unit – III: Determination of Equilibrium Level of National Income

Simple Keynesian Model; Consumption, saving and investment functions – National income determination; Investment multiplier, Government expenditure multiplier, Tax multiplier, Balanced Budget multiplier. [L 10 / Marks:10]

Unit – IV: Commodity market and Money market equilibrium

Concept of demand for Money: Liquidity Preference Approach; Derivation of IS and LM curves –Shifts of IS and LM curves-equilibrium in IS-LM model – Effectiveness of monetary and fiscal policies. [L 10 / Marks:10]

Unit - V: Money, Inflation and Unemployment

Concept of supply of money; Measures of money supply – High powered money – Money multiplier. Concept of Inflation – Demand-pull and Cost-push theories of inflation – Monetary and fiscal policies to control inflation; Unemployment: Voluntary and Involuntary, Frictional and Natural Rate of Unemployment (Concepts only). [L 12 / Marks:12]

Suggested Readings

- W. H. Branson, Macro Economic Theory and Policy
- Joydeb Sarkhel, Macro Economic Theory
- Mazumdar & Chatterjee, Macroeconomics & Advanced Business Mathematics, ABS
- Dornbusch, Fischer & Startz, Macroeconomics, TMH
- •Samuelson & Nordhaus, Macroeconomics, McGraw Hill

Module II Advanced Business Mathematics

Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

- Functions,Limit and Continuity: Definition of functions, Classification of functions, Different types of functions(excluding trigonometrical functions), Elementary ideas of limit and continuity through the use of simple algebraic functions. [8 L /8Marks]
- 2 Differentiation and Integration: Derivative and its meaning; Rules of differentiation; Geometrical interpretation; Significance of derivative as rate measure; Second order derivatives; Integration as anti-derivative process; Standard forms; Integration by substitution. [8 L /8Marks]
- 3 Applications of Derivativeand Integration: Maximum and minimum values ; Cost function ; Demand function ; Profit function; Increasing and decreasing functions ; Rate measure, Applied problems on Average cost (AC), Average variable cost (AVC), Marginal cost (MC), Marginal revenue (MR), Simple area calculation by integration method. [8 L /8Marks]

- 4 Determinants: Determinants upto third order, Elementary properties of determinants, Minors and co-factors, Solution of a system of linear equations by Cramer's Rule (up to three variables). [8 L /8Marks]
- 5 **Matrix**: Definition of matrix, Types of matrices, Operations on matrices (addition, subtraction, multiplication), Adjoint of a matrix, Inverse of a matrix, Solution of a system of linear equations by matrix inversion method (up to three variables).

[8 L /8Marks]

Suggested Readings

- Basic Mathematics and its Application in Economics S. Baruah (Macmillan)
- Mathematics for Economics and Business R. S. Bhardwaj (Excel Books)
- Mathematical Analysis for Economists R. G. D. Allen(Macmillan)
- Mathematics for Management M. Raghavachari (Tata McGraw-Hill)
- Mathematics for Business, Economics and Social Science F. S. Budnick(Tata McGraw Hill)
- Advanced Business Mathematics J. Chakraborti (Dey Book Concern)
- Advanced Business Mathematics R K Ghosh & S Saha (New Central Book Agency(P) Ltd
- Advanced Business Mathematics Dr. Priyotosh Khan (Elegant Publication)
- Advanced Business Mathematics Dr. S N De (Chhaya Prakashani)
- Advanced Business Mathematics N K Nag & S K Nag (Kalyani Publishers)
- Advanced Business Mathematics Dr. Ranjit Dhar (Dishari Prakashani)

DSE 5.2 A CORPORATE ACCOUNTING Full Marks – 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

CORPORATE ACCOUNTING

Unit	Торіс	Details	Marks allotted	No. of lectures
1	Company – Introduction And Accounting for Shares & debentures	 Meaning of Company; Maintenance of Books of Accounts; Statutory Books; Annual Return Issue of Shares – issue, forfeiture, reissue, issue other than in cash consideration and issue to the promoters; Pro-rata issue of shares. Issue of debentures. Sweat equity. Right and Bonus Share – Rules, Accounting Underwriting of shares and debentures: Rules; Determination of Underwriters Liability – with marked, unmarked & firm underwriting; Accounting. Employee Stock Option Plan – meaning; rules; Vesting Period; Exercise Period. Accounting for ESOP. Meaning and Accounting of ESPS. 	20	20
2	Buy back and Redemption of preference shares	 Buy Back of Securities – meaning, rules and Accounting. Redemption of Preference Shares – Rules and Accounting (with and without Bonus Shares) 	10	10
3	Company Final Accounts	Introduction to Schedule III; Treatment of Tax; transfer to reserve, Dividend and applicable tax (out of current profit, out of past reserve); Preparation of Statement of Profit & Loss and Balance Sheet. (tax on net profit without recognizing deferred tax)	15	15
4	Redemption of debenture	Redemption of Debenture – Important Provisions, Accounting for Redemption: by conversion, by lot, by purchase in the open market (cum and ex-interest), held as Investment and Use of Sinking Fund	10	10
5	Valuation	Goodwill – valuation using different methods,i.e., Average Profit, Super Profit, Capitalisation and Annuity. Shares – Valuation using different methods: Asset approach, Earnings approach, Dividend Yield, Earnings- Price, Cum-div and Ex-div, Majority and Minority view and Fair Value	10	10

6	Company Merger And Reconstruction	 Amalgamation, Absorption and Reconstruction– Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (based on relevant accounting standard); inter- company transactions (excluding inter-company share holding). Internal reconstruction – meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction 	15	15
		Total	80	80

Relevant Accounting Standards issued by the Institute of Chartered Accountants of India are to be followed.

Suggested Reading

- Sukla, Grewal, Gupta: Advanced Accountancy Vol. II, S Chand
- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing
- Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication
- Hanif & Mukherjee, Financial Accounting, Vol III, TMH
- • Frank Wood, Business Accounting Vol II, Pearson
- V.K.Goyal, Corprate Accounting, Excel Books
- Rajasekaran, Corporate Accounting, Pearson
- Accounting Standards issued by ICAI

DSE Papers

SEMESTER V

DSE 5.1 M : Consumer Behaviour & Sales Management (50+50) Full Marks – 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Consumer Behaviour Marks

Internal Assessment:10 marksSemester-end Examinations:<u>40 marks</u>Total50 marks

Unit 1 : Consumer Behaviour

No. of Classes 8 / Marks 8

- Concept : Application of Consumer Behaviour Knowledge
- Consumer Behaviour Model
- Market Segmentation
- Marketing Ethics

Unit 2 : Determinants of Consumer Behaviour

No. of Classes 8 / Marks 8

- Consumer as an Individual, Need, Motivation
- Personality, Perception, Learning Attitude
- Communication persuasion
- Consumers in their Social & Cultural Setting, the family, Social class, cross cultural consumer behaviour

Unit 3 : Consumer Decision-making Process

No. of Classes 8/ Marks 8

- Personal Influence & Opinion
- Leadership Process
- Diffusion of innovations
- Consumer decision making process

Unit 4 : Consumer Behaviour & Society

No. of Classes 8 / Marks 8

- Health care Marketing
- Political marketing
- Social Marketing
- Environmental Marketing
- Public Policy & Consumer Protection

Unit 5 : Consumer Behaviour and Market Research

No. of Classes 8 / Marks 8

- Relevance of Marketing Information System
- Market Research in assessing Consumer Behaviour

Suggested Readings:

- Suhiffman & Kanuk, Consumer Behaviour, PHI
- Loudon & Bitta, Consumer Behaviour, TMH
- Bennet & Kassarjian, Consumer Behaviour, PHI
- Batra & Kazmi, Consumer Behaviour, Text & cases, Excel Books
- Beri, Marketing Research, TMH
- Bradley, marketing Research. Oxford University Press
- Schiffman and Kannak, Consumer Behaviour, Pearson Education

Module II : Sales Management

Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit 1 : Sales Organization

No. of Classes 8 / Marks 8

- Purpose and General principles of organization
- Every-growing complexity of Sales Organisation
- Different Models of Sales Organisation
- Factors determining Sales Organisation Structure

• Decentralised Structure

• Common problems associated with Structuring the Sales Organisation

- Modification of Sales Organisation
- Tasks of Chief Sales Executive

Unit 2 : Designing the Sales Force

No. of Classes 8 / Marks 8

•	Objectives
•	Strategies
•	Structure size
•	Sales force Compensation

Unit 3 : Managing the Sales Force

No. of Classes 8/ Marks 8

•	Recruitment
•	Selection
•	Placement
•	Transfer
•	Training and Development
•	Grievances handling of Sales Force
•	Motivating Leading and Communicating with the Sales Force
	Deufennen an Erschartigen of Cale Erner

Performance Evaluation of Sale Force

Unit 4 : Personal Selling and Salesmanship

No. of Classes 8 / Marks 8

- Buyer-Seller Dyads
- Theories of selling
- Personal Selling as a Career
- Steps in Personal Selling Methods of Approaching a Customer
- Handing Customer Objections
- Negotiations Barganing and Negotiation Approaches, Bargaining Strategies and Tactics during Negotation

Unit 5 : Marketing Channels and Selection No. of Classes 8 / Marks 8

- Need
- Functions
- Levels
- Identifying and Analyzing Customers' needs for Products Services
- Developing channel Objective, Selection of Appropriate Channel
- Selection of Appropriate channels
- Motivating, Leading, Communicating with the Channel Members
- Performance Evaluation of the Channel Members
- Modifying Channel Arrangements

Suggested Readings:

- Cundiff, Still and Govoni, Sales management, PHI
- Smith, Sales Management, PHI
- Kotler, Marketing Management, PHI
- Zieglar, et al Sales Promotion and Modern Merchandising
- Stem, Ansary and Coughlan Marketing Channels, PHI
- Warmer, Marketing and Distribution, Macmillan, New York
- Pyle, Marketing Principles, Macmillan, New York
- Doughlas, et al Fundamentals of Logistics and Distributions, TMH
- Gupta, Sales and Distribution Management, Excel Books
- Havaldar & Cavale, Sales and Distribution Management, McGraw Hill
- Hawkins, Motherbaugh & Mookerjee, Consumer Behaviour, McGraw Hill
- Schiffman, Wisenblit & Kumar, Consumer Behaviour, Pearson

DSE 5.2 M : Product & Pricing Management & Marketing Communication

Full Marks – 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Product & Pricing Management

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Introduction to Product Management

No. of Classes 8 / Marks 8

- Product: Basic concept of product, levels, Importance in Marketing Mix, Product Mix Decisions
- Product-Life-Cycle: Concept, strategies related to different stages of PLC.
- Product Portfolio: Concept, Importance, BCG Model

Unit 2 : Marketing Environment and Market segmentation

No. of Classes 8/ Marks 8

Marketing Environment: concept, Importance, Micro-environmental
factors and Macro-environmental factors (Demographic, Economic,
Natural, Technological, Socio-Cultural & Political-Legal)

• Market segmentation: Concept, Importance and bases

Unit 3 : New Product Development

No. of Classes 8 / Marks 8

Concept
Importance
Stages
Reasons for failure of a new product
Adoption process.

Unit 4 : Packaging and Branding:

No. of Classes 8 / Marks 8

jing:
Concept
Importance
Packaging Strategies
Legal and Ethical aspects of packaging
ng:
Concept
Importance
Positioning and repositioning strategies
Basic concepts of Brand equity

Unit 4 : Pricing Management:

No. of Classes 8 / Marks 8

•	Concept
•	Important features of pricing as an element of Marketing Mix
•	Importance of pricing in consumer buying process
•	Determining factors of effective pricing
•	Pricing methods
•	Pricing in the Indian context
•	Regulatory Price Environment

Suggested Reading:

• Kotler and Kellar, Marketing Management, Pearson

- William and Ferrell, Marketing, Houghton Miffin McGraw-Hill
- Neelamegham, Marketing in India: Cases and Readings, Vikas Publishing
- Majumder, Product Management in India, PHI
- McCarthy and Perreault, Basic Marketing Managerial Approach, Irwin, Homewood, Illinois
- Srivastava, R. K., product Management & New product Development, Excel Book
- Ramaswamy and namakumari, Marketing Management, Macmillan India
- Srinivasan Case Studies in marketing: The India Context, PHI
- Baker & Hart, Product Strategy and Management, Pearson

Module II: Marketing Communication

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Communication Process

No. of Classes 8 / Marks 8

•	Importance of communication
•	Steps involved in the process of Communication
•	Barriers to Marketing Communication
٠	Social Media, Digital Marketing- Concepts

Unit 2 : Communication Mix

No. of Classes 8 / Marks 8

•	Advertising : Definition & Importance
•	Different Adverting Function
•	Types of Advertising
•	Advertising Process
•	Setting Advertising Objective
•	Budget
•	Economic aspects of Advertising

Unit 3 : Advertising Process

No. of Classes 8 / Marks 8

•	Advertising Appeal
•	Copy Writing
•	Headline
•	Illustration
•	Message
•	Сору Туре
•	Campaign Planning
•	Different Types of Media
•	Media Planning
•	Scheduling
-	

Unit 4 : Impact of Advertising

No. of Classes 8 / Marks 8

•	Advertising Agency Roles
•	Relationships with Clients
٠	Role of Advertising Department
•	Measuring Advertising Effectiveness
•	Legal and Ethical Aspects of Advertising

Unit 5 : Sales Promotion No. of Classes 8/ Marks

lass	ses 8/ Marks 8
•	Meaning
•	Nature and Function
•	Types
•	Sales Promotion Techniques (Sample Distribution, Coupon, Price off
	premium plan, Consumer contests, Displays Demonstration, Trade Fairs
	and Exhibitions
•	Role of Sales force
•	Limitation of Sales Promotion

Suggested Readings:

- Batra and Myers, Advertising Management, Prentice Hall
- Sengupta, Brand Positioning Strategies for Competitive Advantage, TMH
- Cundiff, Still and Govoni, Sales Management, Prentice Hall
- Rossiter and Percy, Advertising and Promotion Management, MacGraw-Hill Sundage,
- Fryburger and Rotzoll, Advertising Theory and Practice, AITBS
- Belch and Belch, Advertising and Promotion, McGraw Hill

DSE 5.1T PUBLIC FINANCE AND TAXATION

Full Marks - 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: Origin and Development of Public Finance

- Meaning, The rationale for State intervention market failure, externalities, public goods
- Public finance and private finance, principle of maximum social advantage

Unit 2: Taxation and Government Revenue

- Benefit approach, Ability to pay approach
- Impact and incidence of taxation, Direct and indirect taxes, Excess burden of taxes
- Sources and classification of public revenues

(8 L /8 Marks)

(12 L /12 Marks)

Unit 3: Government Expenditure	(4L /4Marks)
• Provision of public goods and merit goods, redistribution objective of	of public expenditure
Unit 4: Impact of Taxation and Public Expenditure	(8 L /8Marks)
• Effect on production, investment, distribution and stability	
Unit 5: Public Debt – Meaning, Impact and Management (8 L /8Marks)	
Unit 6: Development of Federal Finance in India	(8 L /8 Marks)
• The constitutional arrangements, Finance Commissions	
Unit 7: Central Finances in India	(8 L /8 Marks)
• Sources and uses of funds, effects of Fiscal Policy	
Different concepts of Deficit- Impact of deficit	
Unit 8: State Finances	(8 L /8 Marks)
• Sources and uses of funds, issues of federalism	
Unit 9: Fiscal Reforms in India	(8 L /8 Marks)
• Changing scenario of Indian tax Structure, FRBM Act	
Unit 10: Issue of Public Debt in India –Internal and External	(8 L /8 marks)

Suggested Readings:

- Musgrave, R., The Theory of Public Finance, McGraw Hill
- Musgrave & Musgrave, Public Finance in Theory and Practice, McGraw Hill
- Bhargava B.M., The Theory and Working of Union Public of India
- Vaish & Agarwal, Public Finance, Willy Eastern
- Rosen, S.H. & Gayer, T., Public Finance, McGraw Hill

DSE 5.2 T DIRECT TAX LAW AND PRACTICE Full Marks – 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1 :	a)	Residential Status and Incidence of Tax		
		Residential status of a company & tax incidence. Income deemed to		
		accrue or arise in India u/s 9.		
	b)	Incomes which do not form part of Total Income		
	ŗ	Sec 10(11A), 10(12A), 10(30), 10(31), 10(34) read with sec. 115BBDA,		
		10(35), 10(43) and 10AA. (L-10/M-10)		
Unit 2 :	Hea	ds of Income and Provisions Governing Heads of Income		
	a)	Profits and gains of business or profession		
		Advance level discussion with special emphasis on presumptive taxation		
	b)	Capital Gains		
		Advance level discussion with special emphasis on transfer, treatment u/s		
		45(1A), 45(2), 45(3), 45(4), 45(5), Transfer of assets between holding		
		and subsidiary company, and exemptions.		
	c)	Income from other sources		
	,	Advance level discussion with special emphasis on gift and deemed		
		dividend. $(L-25 / M-25)$		

- *Unit 3*: **a)** Income of other Persons included in Assessee's Total Income Revocable transfer of assets, Income from assets transferred to the benefit of spouse and son's wife, conversion of self acquired property into joint family property.
 - b) Deductions from Gross Total Income Deductions u/s 80IAB, 80IAC, 80IBA, 80IE, 80JJ, 80JJAA (L-10/ M-10)
- **Unit 4 :** a) Relief U/S 89
 - b) *Double Taxation Relief*
 - c) Business Restructuring Amalgamation, Demerger, Stump Sale with special reference to treatment of depreciation and capital gains. (L-10 / M-10)

Unit 5: Computation of Total Income and Tax Payable Advance level problems on computation of total income and tax liability of an individual, HUF, Firm, LLP and AOP (including application of AMT) (L-25 / M-25)

Suggested Readings

- Singhnia V.K., and Singhania K, Direct Tax Law and Practice, Taxmann
- Lal and Vashist, Direct Taxes, Pearson
- Ahuja and Gupta, Direct Taxes Law And Practice, Bharat
- Manoharan and Hari, Direct Tax Laws, Snowwhite

Latest edition of the books may be read.

DSE 5.1eB

FUNDAMENTALS OF COMPUTER

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1. Computer Basics: Characteristics of computer. Generations of computer. Type of computer – Mainframe, Mini, Micro (desktop, laptop and handheld), Super Computer. Inside a Computer – Power supply (SMPS), Motherboard, Ports and interfaces, Expansion Cards, memory Chips, Ribbon Cables, Storage devices, Processor. [15 lectures / 12 Marks]

Unit 2. CPU organistion and architecture: Arithmetic/Logic Unit (ALU), control Unit (CU), Registers, System Bus, Processor to Memory Communication Processor to I/O devices Communication. [12 lectures / 12 Marks]

Unit 3. Memory organization: Memory representation, Cache memory, Primary memory – RAM and ROM. Functions of RAM and ROM. Different types of RAM and ROM. Secondary memory – Magnetic and optical storage devices (brief description of different types). Storage organization of a Magnetic disk. Mass storage devices – RAID, Automated Tape Library. [10 lectures / 10 Marks]

Unit 4. Input and Output devices: Major types and their functions. [6 lectures / 6 Marks] **Unit 5. Operating System**: Concept, types, functions. [6 lectures / 6 Marks]

Unit 6. Problem Solving Tools: Algorithm. Flowcharts- Concepts, advantages and disadvantages of flowcharts, Problem solving using flowcharts.

Decision Tables - Concepts, advantages and disadvantages of decision tables, Problem solving using decision tables. [10 lectures / 12 Marks]

Unit 7. Data communication and Computer networks: Transmission Modes - Simplex, Half-Duplex, Full Duplex. Analog and digital transmission. Synchronous and Asynchronous transmission.

Multiplexing. Network Concept, Types - LAN, WAN, MAN, VAN, SAN. Various Topologies - Bus, Star, Ring, Mesh, Tree. Protocol Models - OSI, TCP/IP [16 lectures/ 16 Marks] **Unit 8. Multimedia essentials:** Definition, building blocks of multimedia, multimedia

system, multimedia application. [5 lectures / 6 Marks]

Suggested Readings:

- ITLESL, Introduction to Computer Science, Pearson Education
- ITLESL, Introduction to Information Technology, Pearson Education
- .Sinha & Sinha, Fundamentals of Computers, BPB Publication.
- .Rajaraman, Fundamentals of Computers, PHI

DSE 5.2 eB DATABASE MANAGEMENT SYSTEM & SYSTEM ANALYSIS AND DESIGN Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations Module I: DATABASE MANAGEMENT SYSTEM Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit 1. Introduction to DBMS: Concepts of database and database management system(DBMS). Data abstraction. Architecture – three schema architecture. Administration roles. (L8 /M8) Unit 2. Data models: hierarchical model, network model and relational model. (L6 /M6) Unit 3. Database languages: Data Definition Language (DDL), Data Manipulation Language (DML), and Data Control Language(DCL). (L6/M6) Unit 4. SQL - An Overview: SQL constructs, embedded SQL, Query & Query Optimization Techniques. (L6/M6) Unit 5. Database design: Design phases - conceptual, logical and physical. ER diagram and model. (L6/M6) Unit 6. Database Normalisation: Concept. Normal forms - 1NF, 2NF, 3NF, BCNF. (L4 /M4) Unit 7. Indexing; Single level indexing - Primary, Clustering, Secondary, Multilevel indexing. (L4 / M4)**Suggested Readings:**

• Korth, Data Base System Concepts, TMH

• Leon,Data Base Management System, VIKAS

• Ivan Bayross, PL/SQL Programming

Module II:SYSTEM ANALYSIS AND DESIGNInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1. Overview of System analysis and design: system concepts. System Development models – Waterfall model, Spiral model. System development methods – major steps. (L8 /M8) **Unit 2. Phases in System Development**: Problem definition. Analysis. Design. Implementation. Evaluation. (L6 /M6)

Unit 3. Information requirement analysis: Process modelling with physical and logical data flow

diagrams. (L10/M10)

Unit 4. System design: Process descriptions, Input/output controls, object modeling, Database design, User Interface design, Documentation, Data Dictionary, Development methodologies: Top down, bottom up, structured chart, decision table, decision tree. (L10 /M10)

Unit 5. Testing – Unit, integration, system, Acceptance, regression, Test Case generation. (L6 /M6)

Suggested Reading:

• Parthasarathi, System Analysis & Design, EPH

• Raja Raman, Analysis & Design of Information Systems, PHI

Year 3: Semester VI

		Marks	Credit Hours	
AECC 6.1Chg	Environmental Studies	100	2	
SEC 6.1Chg	Computerised Accounting and e-Filing of Tax Returns (70+30)	100	4	
CC 6.1 Ch	Project Work	100	6	
DSE 6.1 A**	Financial Reporting and Financial Statement Analysis	100	6	
DSE 6.2 A**	Financial Management	100	6	
	•	•	24	

SEC 6.1Chg

COMPUTERISED ACCOUNTING SYSTEM and E-FILING OF TAX RETURN

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit-1: Computerized Accounting Package: Using Generic Software [40 Marks, Class: 40]

- (a) Company creation, ledger creation, order processing, accounting voucher, inventory voucher, memorandum voucher, invoicing, multiple godown handling, Transfer of materials across godowns, Bank Reconciliation,
- (b) Cost Centre, Cost Category, Bill of Material (BoM), Budget and Controls
- (c) Payroll Accounting
- (d) TDS, GST
- (e) Back up & Restore, Export and Import data

Unit 2: Designing Computerized Accounting System

[15 Marks, Class:15]

- (a) Introduction to DBMS Package Table, Query, Form and Report
- (b) Designing Computerized Accounting System using DBMS Package Creating a voucher entry Form, Preparing ledgers, trial balance, profit & loss a/c, and balance sheet with Form wizard and Report
- (c) Designing Payroll System for Accounting using Form, Query, and Report

Unit-3: E-filing of Tax return [25 Marks, Class: 25]

- (a) Preparation and submission of the Income Tax Return (ITR) offline/online for individual taxpayer [e-filing without using DSC and with using DSC, EVC]
- (b) View form 26AS, Upload return, View e-file returns, e-verification
- (c) Use of e-tax calculator (including interest calculation u/s 234A, 234B, 234C)
- (d) E-Pay tax (Challan No./ITNS 280, ITNS 281)
- (e) Preparation and submission online form 10E [Relief u/s 89(1)]

Project Work: Assignment based for each and every topic should be prepared

- Software: Singhania, V.K., E-Filing of Income Tax Returns and Computations of Tax, Taxmann
- Software: "Excel Utility", incometaxindiaefiling.gov.in

CC 6.1 Ch Project Work (Project Report - 50 + Viva-Voce Examination - 50) Full Marks 100

DSE 6.1 A FINANCIAL REPORTING AND FINANCIAL STATEMENT ANALYSIS

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester–end Examinations FINANCIAL REPORTING AND FINANCIAL STATEMENT ANALYSIS

Unit	Торіс	Details	Marks allotted	No. of lectures
1	Holding Company	Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest – Basic principles and preparation of CBS; CBS with loss balance of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intra-	15	15

		group Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding)		
2	Accounting Standards	Conceptual Framework, Presentation of Financial Statements (Ind AS 1), Property, Plant and Equipment (Ind AS 16), Earnings per share (Ind AS 33), [Basic Definitions & Theoretical Concepts, Scope]	15	15
3	Fund Flow Statement	Concept of fund, meaning, nature, various sources And applications, advantages & limitations of Fund Flow Statement.	20	5
4	Cash Flow Statement	Meaning, objectives, difference with Fund Flow Statement; activity classification and preparation and presentation as per relevant Accounting Standard.		15
5	Introduction to Financial Statements AnalysisNature and Component of Financial Statement; Meaning and Need for FSA, Traditional & Modern approaches to FSA, Parties interested in FSA.• Comparative Statement – meaning, preparation, uses, merits and demerits • Common -size Statement – meaning, preparation, uses, merits and demerits • Trend Analysis – meaning, determination, uses, merits and demerits		10	12
6	Meaning, objective, Classification of Accounting RatiosAccounting Ratiosfor FSAMeaning, objective, Classification of Accounting RatiosAccounting Ratiosfor FSAStatement of Proprietor's Fund from the given Ratios.Computation, Analysis and Interpretation of importantratios for measuring –Liquidity, Solvency, CapitalStructure, Profitability and Managerial Effectiveness.		20	18
			80	80

Suggested Readings:

- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing
- Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication

- Accounting Standards issued by ICAI
- L.S.Porwal, Accounting Theory, Tata Mcgraw Hill
- Gokul Sinha, Accounting Theory & Management Accounting,
- B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
- Lev, Financial Statement Analysis-a new approach, Prentice Hall
- Foster G, Financial Statement Analysis, Prentice Hall
- White, Sondhi& Fred, Analysis and Use of Financial Statement, John Wiley
- Bernstein & Wild, Financial Statement Analysis; theory, application & interpretation, Mcgraw Hill
- Ormiston, Understanding Financial Statement, Pearson
- Bhattacharyya, Asish K., Introduction to Financial Statement Analysis, Elsevier
- Hanif & Mukherjee, Financial Accounting, Vol III, McGraw Hill
- Subramanyam, K.R. and Wild, Financial Statement Analysis, McGraw Hill

DSE 6.2 A

FINANCIAL MANAGEMENT

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit	Торіс	Content	Marks	Hours
1	Introduction	 Important functions of Financial Management Objectives of the firm: Profit maximisation vs. Value maximisation Role of Chief Financial Officer. Financial environment in which a firm has to operate 	10	10
	Basic Concepts	 Time Value of Money: concept and reasons Compounding and Discounting techniques Concepts of Annuity and Perpetuity. Risk-return relationship (concepts only) 		
2	Sources of Finance and Cost of Capital	 Different sources of finance; long term and short term sources Cost of capital: concept, relevance of cost of capital, Implicit and Explicit cost, specific costs (its computation) and weighted average cost (its computation), rationale of after tax weighted average cost of capital, marginal cost of capital (its computation). 	10	10
3	Leverage and Capital Structure Theories	 EBIT-EPS analysis and its limitations. Financial break even, point of indifference Leverage- Business Risk and Financial Risk - Operating and financial leverage, Trading on Equity Capital Structure decisions - Capital structure patterns, designing optimum capital structure, Constraints, Features of sound capital structure, 	10	10

		Various capital structure theories (excluding M-M model).		
4	Working Capital Management (1)	 Introduction; Meaning and various concepts of Working Capital Management of Working Capital and Issues in Working Capital Estimating Working Capital Needs; Operating or Working Capital Cycle. 	10	10
5	Working Capital Management (2)	 Policies relating Current Assets – Conservative, Aggressive and Balanced Various sources of finance to meet working capital requirements; Financing current assets: Strategies of financing (Matching, Conservative, and Aggressive policies) Management of components of working capital (debtors management only–credit period -simple type) 	10	10
6	Capital Expenditure Decisions (1)	 Purpose, Distinguishing features, Objectives & Process, Understanding different types of projects Concept of Cash flow; Cash flow vis-à-vis Profit and determination of Cash flow Techniques of Decision making: Non-discounted and Discounted Cash flow Approaches Payback Period method, Accounting Rate of Return and their relative merits and demerits 	10	10
7	Capital Expenditure Decisions (2)	 Discounted Payback Period, Net Present Value, Profitability Index and Benefit Cost ratio, Internal Rate of Return, relative merits and demerits of the methods.(excluding replacement decision) Ranking of competing projects, Ranking of projects with unequal lives. Capital Rationing. 	10	10
8	Dividend Decisions	 Meaning, Nature and Types of Dividend, Dividend and Retention; concept of pay-out ratio, retention ratio and growth. Dividend policies and formulating a dividend policy Dividend Theories: Walter's Model, Gordon's Model, 	10	10
		Total	80	80

Suggested Readings

- M.Y.Khan & P.K.Jain, Financial Management, TMH
- Van Horne, Financial Management & Policy, Pearson
- Van Horne, Fundamentals of Financial Management, PHI
- Banerjee, B., Financial Policy & Management Accounting, PHI
- Chandra, P., Financial Management, TMH
- Rustagi, R.P. Fundamentals of Financial Management. Taxmann Publication Pvt. Ltd.
- Pandey, I.M. Financial Management. Vikas Publications.
- Majumdar, Ali and Nesha, Financial Management, ABS
- Kothari, R, Financial Management, Sage
DSE 6.1 M Retail Management and Marketing of Services (50+50) Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Retail Management

Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1 : Introduction to Retailing

No. of Classes 8 / Marks 8

•	Relevant Concept
•	Importance
•	Function

Unit 2 : Retailing in India

No. of Classes 8 / Marks 8

•	Factors	determining	Growth	of Retailing i	n India
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• Impact of Retail in Nation's Economy

• Key Drivers of the Indian Retails Industry

Unit 3 : Retail Formats

No. of Classes 8 / Marks 8

•	Concept
•	Types of Retailing – Multi Channel Retailing, Single Channel
	Retailing
•	Product factors of Retail format
•	Location factors of Retail format
•	Current Indian Scenario

Unit 4 : Pricing in Retail No. of Classes 8 / Marks 8

•	Price factors of Retail format
•	Importance of Retail Pricing
•	Factors affecting Retail Pricing
•	Approaches to Product Pricing

Unit 5 : Promotion in Retail

No. of Classes 8 / Marks 8

- Need and Objective of Promotional Mix in Retailing
- Promotional Mix and Strategy development
- Customer Relationship Management

Suggested Reading

- Madaan, Fundamentals of Retailing, Tata McGraw-Hill
- Pradhan, S., Retailing Management, McGraw Hill
- Seshanna & Prasad, Retail Management, McGraw Hill
- Berman, Evans & Mathur, Retail Management, Pearson

Module II: Marketing of Services

Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1 : Introduction to Services Marketing & Services and economy of a country No. of Classes 8 / Marks 8

_	
•	Concept of services
•	Types
•	Function
•	Nature
•	Characteristics
٠	Understanding Services Customers
•	Impact of service marketing in the economy of a country

Unit 2 : Issues in Marketing of Services

No. of Classes 8 / Marks 8

•	Service- Product or Packages
•	Pricing in Services
•	Place in Services
•	Promotion of Service
•	People in Services
•	Physical Evidence
•	Process Management

Unit 3 : Service Marketing Management

No. of Classes 8 / Marks 8

- Managing Services Quality
- Relationship marketing Concept
- Service Communication Mix
- Communication Strategy

Unit 4 : Consumer Behaviour and Service

No. of Classes 8 / Marks 8

- Consumer Behaviour consideration
- Guidelines for Developing Service Communications
- Consumer Decision making process & ethical issues (concepts, factors influence

decision making process, ethical decision making methods)

Unit 5 : Service Marketing in Non-profit and profit Organisations No. of Classes 8 / Marks 8

Travel and Tourism
Financial Services
Information Technology Services
Media Services
Health Care Services
Educational Services

Suggested Reading

- Verma, H. V., Services Marketing, Pearson
- Venugopal and Raghu, Services Marketing, Himalaya Publishing Ltd.
- Ravi Shankar, Services Marketing : The Indian Perspective, Excel Books
- Rampal & Gupta, Services Marketing, Concepts, Applications & Cases, Galgotia
- Apte, Services Marketing, Oxford University Press

DSE 6.2 M

Rural Marketing and International Marketing (50+50) Full Marks 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Rural Marketing

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Rural Marketing and Environment No. of Classes 8 / Marks 8

$\mathbf{\tilde{v}}$	Teens	bes of mains o
	•	Concept
	•	Importance
	•	Rural vs. Urban Marketing
	•	Geographic
	•	Economic
	•	Socio-Cultural
	•	Infrastructural factors
	•	Their influence on Rural Marketing Operation

Unit 2 : Rural Consumer

No. of Classes 8 / Marks 8

•	Characteristics
•	Attitudes
•	Behaviour
•	Buying Patterns and Influences

Unit 3 : Rural Marketing Strategies

No. of Classes 8 / Marks 8

-		
	•	Segmenting Rural markets
	•	Product Planning for Rural markets
	•	Market Size
	•	Packaging and Branding Decisions
	•	Pricing Decisions

Unit 4 : Promotion and Distribution in Rural Markets

No. of Classes 8 / Marks 8

- Promotion in Rural Markets
- Distribution Channels and Logistics in Rural Markets

Unit 5 : Marketing of Agricultural Products

No. of Classes 8 / Marks 8

-		
	٠	Pricing
	•	Distribution of Agricultural Products
	٠	Role of Government
	•	Other organization in Marketing Agricultural products
	•	Co-operative Marketing
	•	Problems in Agricultural Marketing

Suggested Readings:

- Rajagopal, Management of Rural Business, Wheeler
- Neelamegham, Marketing in India : Cases and Redings, Vikas Publishing
- Mathur, U. C., Rural Marketing, Wheeler
- Nyyar and Ramaswamy, Globallization and Agricutural Marketings, Rawat Publishers
- Mamoria, Agricultural marketing, Himalaya Publisheing House
- Kashyap, P., Rural Marketing, Pearson

Module II: International Marketing

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Introduction

No. of Classes 8 / Marks 8 • Definition

• Nature and Scope of International Marketing

- International Marketing Environment (Basic Concepts) PESTL-SOWC
- Market Entry (When-Why-How)
- Entry Strategy (Concept Features Advantages and Disadvantages)

Unit 2 : Product/ Service Planning for International Market No. of Classes 8 / Marks 8

Categorization	(Standardisation	/	Adaptation)	of	Product/	Service
Planning						
 Dackaging a 	nd Labelling					

- Packaging and Labelling
 Opality
- Quality
- After Sales services

Unit 3 : International Pricing

No. of Classes 8 / Marks 8

•	Facto	ors influencing International Price
•	Pricir	ng Strategy
	-	

- Export Price
- Price Quotation and Payment Terms

Unit 4 : Promotion and Distribution of Product/Service Abroad No. of Classes 8/ Marks 8

Р	romotional Tools:
	Sales literature
	Direct Mail
	Personal Selling
	Advertising
	Trade Fairs and Exhibitions
•	Distribution Channels (Categorization – Features - advantages and
	disadvantages)
•	Logistics (Meaning – Categorization - advantages and disadvantages)

• Selection and management of Foreign Sales Agents

Unit 5 : Import and Export Policies and Practices in India No. of Classes 8/ Marks 8

- EXIM Policy An Overview
- Trends in India's Foreign Trade
- Steps in Starting an Export Business

- Documentation and Procedure
- Legal Aspects
- Export Finance
- Export Risk Insurance
- Export Assistance and Incentives
- Export Oriented Unit
- Export Processing Zone

Suggested Readings

- Bhattacharyya and Varsney, International Marketing Management, Sultan Chand
- Bhattacharyya, Export Marketing Strategies for Success, Global Press
- Keegan, Multinational Marketing Management, Prentice Hall
- Kriplani, International Marketing, Prentice Hall
- Taggart and Mott, The Essence of International Business, Prentice Hall
- Kotler, Principles of Marketing, Prentice Hall
- Caterora and Keavenay, Marketing : an International Perspective, Irwin, Homewood, Illinois
- Paliwala, The Essence of International Marketing, Prentice Hall
- Vasudeva, International Marketing, Excel Books
- Pateora, Graham and Salwan, International Marketing, McGraw Hill

DSE 6.1 T Indirect Tax: Laws and Practices Full Marks 100

Full Marks 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Full Marks –	- 100		
Unit 1 :	a)	Basic Concepts	
		Concepts of Indirect Ta	ax, Difference between Direct and Indirect Tax, Indirect
		tax structure in India, P	roposed changes in indirect tax structure in India.
	b)	Central Excise	(L-25 / M-25)
Unit 2 :	WB V	/AT	(L 15 / M 15)
Unit 3 :	Custo	ms	(L 20 / M 20)
Unit 4 :	Centr	al Sales Tax	(L 10 / M 10)
Unit 5 :	Servio	ce Tax	(L 10 / M 10)
Suggested Re	eadings	5	
• Datey V.S	S., Indi	rect Taxes Law And Prac	ctice, Taxmann

- Sanjeev Kumar, Systematic Approach to Indirect Taxes, Bharat
- Bangar and Bangar, Students' Gide to Indirect Taxes, Aadhya Prakashan.

This Paper will be replaced by Goods & Service Tax Law whenever the law is enforced and accordingly revised syllabus will be announced.

Latest edition of the books may be read.

Paper DSE 6.2T TAX PROCEDURE AND PLANNING Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I: TAX PROCEDUREInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 :	Return of Income and Assessmenta) Different Returns & Forms for all types of assessees				
		b) Assessments and Reassessments (basic	c concepts) (L 15 / M 15)		
Unit 2 :	a)	Advance Tax (all types of assessees)			
	b)	Interest & Fees			
	c)	Advance Ruling for Non-resident	(L 10 / M 10)		
Unit 3 :	a)	TDS			
	b)	Refund of Excess Payment	(L 5 / M 5)		
Unit 4 :	a)	Penalties and Prosecutions			
	b)	Appeals and Revisions			
	c)	Income Tax Authorities	(L 10 / M 10)		

Module II: TAX PLANNING Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1 : Basic Concepts

- a) Concept and difference between tax planning, tax avoidance, tax evasion and tax management.
- b) Objectives, requisites, factors and types of tax planning
- c) Tax on distributed Profit and on units of mutual fund.

(L 5 / M 5)

Unit 2 : Tax Planning-I

- a) Tax Planning under different Heads of Income
- b) Tax Planning on Deductions under Chapter VIA (L 10/M 10)

Unit 3 : Tax Planning-II

- a) Setting up a New Business : Location, nature and form of business.
- b) Financial Management Decisions : Capital structure, dividend policy, deemed dividend and bonus shares.
- c) Tax Planning related to sale of scientific research assets.

- d) Tax Planning related to Amalgamation, Demerger and conversion of company into LLP.
- e) Transfer of assets between Holding & Subsidiary company
- f) Tax planning with reference to receipt of insurance premium.
- g) Own fund versus borrowed fund for financing of assets.
 - h) Sale in domestic market or export

(L15 / M 15)

- Unit 4 :
 - a) Tax planning in relation to Employees Compensation
 - b) Basic Concepts of transfer pricing, APA.
 - c) Relief for Double Taxation (covering more than one foreign country) (L10 / M 10)

Suggested Readings

- Singhania V.K., and Singhania K, Direct Tax Law and Practice, Taxmann
- Lal and Vashist, Direct Taxes, Pearson
- Ahuja & Gupta Corporate Tax Planning Management, Bharat Law House.
- Singhania V.K., and Singhania M, Corporate Tax Planning and Business Tax Procedure, Taxmann.

Latest edition of the books may be read.

DSE 6.1 e-B Internet & WWW and Functional e-Business System (50+50) Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I: INTERNET AND WORLD WIDE WEB

Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1. Working of the internet with TCP/IP: Origin of TCP/IP. TCP/IP communication architecture, Internet Architecture, Working of TCP/IP,TCP/IP Applications - FTP, Telnet, Simple Mail Transfer Protocol, Network File System. (L10 /M10) Unit 2. Internet Concepts: WWW, Internet and E-Commerce, Linking to the Internet, Internet Address, Internet Tools- Information Retrieval tools (ftp, Gopher),Communication Tools(Email, FTP, Telnet, Usenet), Multimedia Information Tools(Home page),Information Search Tools(Archie, Veronica, WAIS). Domain Name System. (L12 /M12) Unit 3. Intranet and Extranet: Intranet, Intranet vs. Groupware, Intranet Hardware, Intranet Software, Intranet Services (Web (HTTP) Publishing, HTML,), Communication Systems (Email, Fax), Software used in Electronic mail, Electronic Meeting Systems(Audio conferencing, Video Conferencing, Groupware), Extranet. (L6 /M6)

Unit 4. Internet Security: Security on the internet, Network and Website Security Risks, Site Hacking, Security Incidents on the internet security and email, network and website security, Firewall(Concept, Components and Constituents, Benefits), Enterprise wide security Framework,

secure physical infrastructure).

(L12 /M12)

Module II: FUNCTIONAL E-BUSINESS SYSTEM Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1. Applications of E-Business: Direct Marketing and Selling, Value Chain Integration, Supply Chain Management, Corporate Purchasing, Financial and Information Services, Obstacles in adopting **E-Business Applications.** (L6 /M6) Unit 2. E-Strategy: Information and Strategy, The virtual value chain planning E-Business project. E-Business strategy and knowledge management. (L 4 / M 4)Unit 3. Customer -effective Web design: Requirements of Intelligent Websites, Website Goals and Objectives, planning the budget, analyzing website structure, fixed versus flexible webpage design, choosing a page size, website development tools, design alternatives, outsourcing web design, testing and maintaining websites. (L6/M6) Unit 4. Electronic Payment Systems-Overview of Electronic Payment Systems, Customer to Merchant Payments, Peer to Peer Payments. Electronic Banking, Electronic Fund Transfers. (L6/M6) Unit 5. E-Business Marketing Concepts: Basic marketing concepts for internet marketing, EBusiness marketing and branding strategies. Strengthening the customer relationship. (L4/M4) Unit 6. E-Commerce and Online service industries: Online financial services. Online travel services. Online career services. (L4 / M4)Unit 7. Mobile Commerce- Wireless Spectrum, WAP - Origins of WAP, WAP Architecture. Wireless Datagram Protocol(WDP), Short Message Services, General Packet Radio Service(GPRS), Wireless Technology (CDMA, GSM), Different generations in Wireless Communication, Mobile commerce and its future in India. (L10 /M 10) **Suggested Readings:** • S. Jaiswal, Doing Business on the Internet E-COMMERCE (Electronic Commerce for Business), Galgotia Publications. • P.T.Joseph, E-Commerce An Indian Perspective, S.J., PHI. • Kenneth C. Laudon, Carol Guerico Traver, 3.E-Commerce Business.Technology, Society,

Pearson Education.

• Schneider, E-Commerce, Thomson Publication

DSE 6.2 e-B COMPUTER APPLICATION (Practical) & E-BUSINESS APPLICATION (Practical)

Full Marks 100	
Internal Assessment:	20 marks
Semester-end Examinations:	<u>80 marks</u>
<u>Total 100</u>	marks

Marks shown against the units indicate marks for Semester-end Examinations

Module ICOMPUTER APPLICATION (Practical)Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: C++ Unit 2: Use of Accounting software package – ACE, TALLY [20 classes / 20 marks] [20 classes / 20 marks]

Module II :E-BUSINESS APPLICATION (Practical)Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: HTML & DHTML[20 classes / 20 marks]Unit 2: JAVA[20 classes / 20 marks]1. Oops Concept and Introduction to JAVA. 2. An overview of Java. 3. Data Types - variables and
arrays. 4. Operators, Control statements. 5. Classes and objects. 6. Inheritance. 7. String and string
buffer. 8. Exception handling. 9. Applets.

M: Marks allotted to the Unit; L: No. of Lectures/ Classes for the Unit

University of Calcutta



B.Com. Syllabus (General) under Semesterised CBCS

2017

University of Calcutta

B.Com. General Course Structure under Semesterised CBCS

Year I: Semester I

		Marks	Credit Hours	
AECC 1.1Chg	Language: Communicative English - 50Indian Language - 50	100	2	
GE 1.1 Chg	Microeconomics I & Statistics	100	6	
CC 1.1 Chg	Business Laws	100	6	
CC 1.2 Chg	Principles of Management	100	6	
CC 1.1 Cg	Financial Accounting - I	100	6	

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Year 1: Semester II

		Marks	Credit Hours	
GE 2.1 Chg	E-Commerce & Business Communication (50+50)	100	6	
CC 2.1 Chg	Company Law	100	6	
CC 2.2 Chg	Marketing Management & Human Resource Management	100	6	
CC 2.1Cg	Cost and Management Accounting I	100	6	
			24	

Year 2: Semester III

		Marks	Credit Hours	
SEC 3.1 Chg	Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100	4	
GE 3.1 Chg	Business Mathematics & Statistics	100	6	
CC 3.1 Cg	Financial Accounting II	100	6	
			16	

Year 2: Semester IV

		Marks	Credit Hours	
GE 4.1 Chg	Microeconomics II & Indian Economy (50+50)	100	6	
CC 4.1 Chg	Entrepreneurship Development and Business Ethics	100	6	
CC 4.1 Cg	Taxation I	100	6	
CC 4.2 Cg	Cost and Management Accounting -II	100	6	
			24	

Year 3: Semester V

		Marks	Credit Hours	
CC 5.1 Cg	Auditing & Assurance	100	6	
DSE 5.1 A*	Taxation II	100	6	
DSE 5.2 A*	Corporate Accounting	100	6	
	-		18	

Options:

*Or DSE 5.1 M (Consumer Behaviour and Sales Management -50+50)

& DSE 5.2 M (Product & Pricing Management and Marketing Communication (50+50)

*Or DSE 5.1T (Public Finance and Taxation)

& DSE 5.2 T (Direct Tax: Laws and Practice)

*Or DSE 5.1 e-B (Fundamentals of Computer) & DSE 5.2 e-B DBMS and System Analysis &Design (50+50)

Year 3: Semester VI

		Marks	Credit Hours	
AECC 6.1Chg	Environmental Studies	100	2	
SEC 6.1 Chg	Computerised Accounting	100	4	
	and e-Filing of Tax Returns			
DSE 6.1 A**	Financial Reporting and	100	6	
	Financial Statement Analysis			
DSE 6.2 A**	Financial Management	100	6	
<u>.</u>		•	18	•

Chg: Common for Honours and General; Cg: Core Course for General Options:

**Or DSE 6.1 M (Retail Management and Marketing of Services (50+50) & DSE 6.2 M (Rural Marketing and International Marketing (50+50)

**Or DSE 6.1 T (Indirect Tax: Laws and Practices) & DSE 6.2 T (Tax Procedures and Planning)

**Or DSE 6.1 e-B (Internet & WWW and Functional e-Business System (50+50) & DSE 6.2 e-B(Computer Applications and e-Business Applications – Practical (50+50)

		Marks	Credit Hours	
Ability Enhancement	Two Papers	200	$2 \ge 2 = 04$	
Compulsory Course				
(AECC)				
Skill Enhancement	Two Papers	200	2x4 = 08	
Elective Course (SEC)				
Generic Elective (GE)	Four Papers	400	4 x 6 = 24	
CORE COURSE (CC)	Eleven Papers	1100	11 x 6 =66	
Discipline Specific	Four Papers	400	4 x 6 = 24	
Elective (DSE)				
		2300	Total 126	

Summary for B.Com. General

Extracts from UGC CBCS Model for B.Com. Hons Syllabi (Page 2)

Notes:

1. For Practical Lab based

a. Core Courses BCH 1.2 (Financial Accounting), BCH 3.2 (Income-tax Law and Practice), BCH 3.4 (Business Statistics), BCH 4.2 (Business Mathematics), and BCH 5.2 (Fundamentals of Financial Management) there shall be 4 Credit Hrs. for Lectures + one Credit hr. (Two Practical Periods per week per batch) for Practical Lab + one credit Hr for Tutorials (per group)

b. Core Courses BCH 4.3 (Computer Applications in Business) and Discipline Specific Elective BCH Group A (e) (Computerised Accounting System), there shall be 4 Credit Hrs. for Lectures + Two Credit hrs. (4 Practical Periods per week per batch) for Practical Lab

c. Skill Enhancement Elective Course BCH 3.5(E-Commerce), there shall be 3 Credit Hrs. for Lectures + One Credit hrs. (2 Practical Periods per week per batch) for Practical Lab

2. For other core and elective papers, there shall be 5 lectures and one Tutorial (per batch)

From above, It appears that:

- **one credit** represents **one lecture hour** for theoretical papers and there will be **one credit hour for tutorial** for each of theoretical papers / subjects.
- For practical lab based papers, **one credit represents two practical periods** and there will be no tutorial for practical papers/subjects.

Therefore, it is suggested that:

AECC: 2 credit hours means 2 lecture hours, i.e., 120 minutes lectures or 3 periods of 40 mins each per week.

SEC (involving lab): 4 credit hours may be divided into two credit hours for lectures (3 periods of 40 mins) and 2 credit hours for practical (4 practical periods per batch) per week

GE, CC and DSE: 6 credit hours means 5 credit hours for lectures (300 mins for lectures, i.e., 7-8 periods of 40 mins each) and 1 tutorial hour for each group/ batch of students per week.

CONTENTS

GE 1.1 Chg

Microeconomics I & Statistics (50+50)

Marks: 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total</u> 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I

Microeconomics I

Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit:I Demand and Consumer behaviour

Concept of demand, demand function, law of demand, derivation of individual and market demand curves, shifting of the demand curve; elasticity of demand.

Consumer behaviour: Marshallian utility approach and Indifference Curve approach; utility maximization conditions . Income-Consumption Curve (ICC) and Price-Consumption Curve (PCC): Derivation of demand curve from PCC.

[L-15/Marks:15]

Unit: II Production and Cost

Production function: Short-run and Long-run; Relation among Total Product, Average Product and Marginal Product, Law of returns to a variable factor, Law of Returns to Scale; Concepts of Iso-quant and iso-cost line; Conditions for optimization (graphical approach).

Cost: Accounting and Economic Costs; Social and Private Costs; Short-run and Long-run Costs; Relation between Average and Marginal Costs; Determination of LAC curve from SAC curves, LMC.

[L-10/Marks:10]

Unit: III Perfect Competition

Concept of Perfectly Competitive market: Assumptions, Profit maximization conditions; Related concepts of Total Revenue, Average Revenue and Marginal Revenue, Short-run and Long-run equilibrium of a firm; determination of short-run supply curve of a firm, measuring producer surplus under perfect competition, Stability analysis– Walrasian and Marshallian, demand-supply analysis including impact of taxes and subsidy.

[L-15/Marks – 15]

Suggested Readings

- Pindyke and Rubinfeld, Micro Economics, Pearson
- Gould & Ferguson, Micro Economic Theory
- Banerjee & Majumdar, Business Economics and Business Environment, ABS
- Banerjee & Majumdar, Banijjik Arthaniti –o- Banijjik Paribesh(Bengali)

- Dwivedi, D.N., Managerial Economics, Vikash Publications
- Mankiw.N.G., Principles of Microeconomics, Cengage
- Das, P. & Sengupta A., Economics, Oxford
- Samuelson & Nordhaus, Macroeconomics, McGraw Hill

Module II

Statistics (50 marks)

Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

1. Fundamentals:Definition of Statistics, Scope and limitation of Statistics,Attribute and variable,Primary and secondary data, Method of data collection, Tabulation of data, Graphs and charts, Frequency distribution, Diagrammatic presentation of frequency distribution.

[8 L /8Marks]

- Measures of Central Tendency: Meaning of central tendency, Common measures mean (A.M., G.M., H.M.) median and mode, Partition values- quartiles, deciles and percentiles, Applications of different measures. [8 L /8Marks]
- Measures of Dispersion: Meaning of dispersion, Common measure- range, quartile deviation, mean deviation and standard deviation; Relative measures of dispersion, Combined standard deviation, Applications of different measures. [8 L /8Marks]
- Moments, Skewness and Kurtosis: Different types of moments and their relationships, Meaning of skewness and kurtosis, Different measures of skewness, Measure of kurtosis, Applications of different measures. [8 L /8Marks]
- 5. Interpolation: Finite differences, Polynomial function, Newton's forward and backward interpolation formula, Lagrange's interpolation formula.
 [8 L /8Marks]

Suggested Readings:

- Business Mathematics and Statistics- N G Das & J K Das (Tata McGraw Hill)
- Statistical Methods in Business and Social Science G. V. Shenoy and M. Pant (Macmillan)
- Business Statistics R. S. Bhardwaj (Excel Books)
- Statistics for Management Levin, Rubin and Rastogi (Pearson Education)
- Statistics for Management, Srivastava and Rego, McGraw Hill
- Hazarika Padmalochan, A Text Book of Business Statistics, S.Chand
- Kellor & Arora, Business Statistics, Cengage
- Pillai and Bhagwati, Business Statistics, S.Chand
- Business Mathematics & Statistics J. Chakraborti (Dey Book Concern)
- Business Mathematics & Statistics R K Ghosh & S Saha (New Central Book Agency(P) Ltd
- Elementary Business Mathematics & Statistics Dr. Priyotosh Khan (Elegant Publication)
- Business Mathematics & Statistics Dr. S N De (Chhaya Prakashani)
- Business Mathematics & Statistics N K Nag & S K Nag (Kalyani Publishers)
- Business Mathematics & Statistics Dr. Ranjit Dhar (Dishari Prakashani)

CC 1.1 Chg

Business Laws

Marks: 100

Internal Assessment: 20 marks **Semester-end Examinations: 80 marks** 100 marks Total

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: The Indian Contract Act, 1872

a) Contract – meaning, characteristics and kinds, Essentials of a valid contract

b) Offer and acceptance (Definition, Rules, Communication and Revocation of offer and acceptance)

c) Consideration (Definition, Elements, Types, Rules), "No Consideration No Contract" and its exceptions; Capacity to Parties (Definition and Types)

d) Consent, Free consent, Coercion, Undue Influence, Fraud, Misrepresentation, Mistake

e) Legality of objects and Consideration

f) Void and Voidable agreements – Definition, Types and Distinction

g) Discharge of a contract – Modes of discharge, Breach and Remedies against breach of contract

h) Specific Contracts - Contingent contracts, Quasi, Contract of Indemnity, Guarantee, Bailment, Pledges

Unit 2: The Sale of Goods Act, 1930

a) Contract of sale, meaning and difference between sale and agreement to sell

b) Conditions and warranties

c) Transfer of ownership in goods including sale by a non-owner

d) Unpaid seller – meaning, rights of an unpaid seller against the goods and the buyer

Unit 3: Partnership Laws

A) The Partnership Act, 1932

a. Definition – Partner, Partnership

b) Nature and Characteristics of Partnership

c) Types of Partners

d) Registration of a Partnership Firms and consequences of non-registration

e) Rights and Duties of Partners

f) Dissolution of firms - meaning and grounds

B) The Limited Liability Partnership Act, 2008

a) Definition

b) Salient Features of LLP

c) Advantages and disadvantages of LLP

d) Differences between: LLP and Partnership, LLP and Company

e) Incorporation of LLP

Unit 4: The Negotiable Instruments Act 1881

a) Definition, Features, Types, Parties of Negotiable Instruments: Promissory

Note, bill of exchange, Cheque (Definition and Types)

b) Endorsement: Types of Endorsement

c) Holder and Holder in Due Course, Privileges of Holder in Due Course.

d) Dishonour of Negotiable Instruments: Modes, Consequences, Notice of Dishonour; Noting and Protesting

e) Discharge of Negotiable Instruments: Meaning and Modes

[No of classes 10 / Marks 10]

[No of classes 20 / Marks 20]

[No of classes 10 / Marks 10]

[No of classes 30 / Marks 30]

Unit 5: Consumers Protection Act, 1986

a) Objectives and features of Consumers Protection Act

b) Definitions – Complainant, Complaint, Consumer, Consumer Dispute, Defect, Deficiency, District Forum, Person

c) Unfair trade practices

d) Consumer Protection Council (Central, State and District – their constitutions and objectives)

e) Consumer Dispute Redressal Agencies: Composition and jurisdiction of District forum, State Commission and National Commission

(If any new provisions are enacted in place of the existing provisions, the syllabus will accordingly include such new provisions in place of existing provisions with effect from such date as prescribed by Calcutta University. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus)

Suggested Readings

- Kumar Ravindra, Legal Aspects of Business, Cengage
- Tulsian & Tulsian, Business Laws, S.Chand
- Kapoor N.D., Business Laws, Sultan Chand
- Das S.K. & Roy P., Business Regulatory Framework, OUP
- Gulsan S.S., Business Laws, Excel Books
- Roychowdhury, Bhattacharjee & Datta, Business Regulatory Framework, Elegant Publishers
- Bhadra, Satpati and Mitra, Ainer Ruprekha (Bengali Version), Dishari

CC 1.2 Chg Principles of Management Marks: 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total</u> 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit-1: Introduction:

No. of classes: 16 / Marks: 16

Management-definition, importance, functions, nature-as profession, science and art, universality of management; levels of management; managerial tasks and skills.

Different Schools of Thoughts: Classical School-contributions of Taylor and Henri Fayol; Neoclassical school-Human Relations approach and Behavioral Science Approach; Modern School; System approach and Contingency approach.

Unit-2: Planning:

No. of classes: 16 / Marks: 16

Concept, importance, steps, types, premises, barriers to effective planning and remedial measures; strategic planning-concept forecasting –concept, techniques.

Unit-3: Organizing:

No. of classes: 16 / Marks: 16

Concept, importance, principles, different organization models-line and staff; Functional; Departmentation-need, basis, principles, Delegation of Authority-elements, steps barriers; Centralization and Decentralization of Authority; Span of Management; concept and determining factors.

Unit-4: Directing and Staffing:

No. of classes: 16 / Marks: 16

Directing: concepts, importance of directing,

Leadership: Concept, importance, types, leadership traits, Tannenbaum & Schmidt's Model and Blake & Mouton's Model.

Staffing: concepts, importance

Unit- 5: Motivation, Co-ordination and Control:

No. of classes: 16 / Marks: 16

Motivation: Concept, importance, importance of need theory, and contributions of McGregor, Maslow, Herzberg.

Coordination: concepts, importance, principles and implementation techniques.

Control: concepts, importance and tools of control.

Suggested Readings

- Kaul, Principle and Practice of Management, Vikash
- Koontz & Weirich, Essentials of Management, TMH
- Koontz, Weirich & Cannice, Management, McGraw Hill
- Stoner & Freeman, Management, PHI
- Drucker, P.F., Managing Challanges for the 21st Century, Butterworth, Oxford
- Mitra, J., & Somani, N., Principles of Management and Business Communications, Oxford

CC 1.1 Cg FINANCIAL ACCOUNTING – I Marks: 100

Internal Assessment: 20 marks Semester-end Examinations: 80 marks Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

FINANCIAL ACCOUNTING - I

Unit	Торіс	Details	Marks allotted	No. of Lectures
1	Introduction	 Nature of accounting; Users of accounting information; Qualitative characteristics of accounting information. Double entry book keeping system – Basic accounting equation, meaning of assets, liabilities, equity, revenue and expenses. Accounting Cycle - Recording of transaction: Journal, Ledger and preparation of Trial Balance. Bases of accounting; cash basis and accrual basis. Basic concepts and conventions: entity, money measurement, going concern, cost, realisation, accruals, periodicity, consistency, prudence (conservatism), materiality, matching and full disclosures. 	5	5
		 Revenue recognition: Meaning of revenue; objective; timing of recognition. Recognition of expenses. Inventories: meaning. Significance of inventory valuation. Lower of cost or market rule; Inventory ascertainment and reconciliation. 		
2	Concepts for determination of business income	 The nature of depreciation. The accounting concept of depreciation. Factors in the measurement of depreciation. Methods of computing depreciation: straight line method and diminishing balance method; Disposal of depreciable assets; change in estimate and method of charging depreciation. Accounting for depreciation: Asset-depreciation, Asset-provision. Reserves and provisions: Meaning; Objective; Types & Accounting 	15	15
		 Capital and revenue expenditures and receipts: general introduction only. Adjustment and rectification 		
3	Introduction to Accounting Standard	Financial accounting standards: concept, benefits, procedure for issuing accounting standards in India. Need for a global standard, IFRS (concept only).	10	10
	Introduction to Accounting Theory	Concept of accounting theory; relation with practice; GAAP; Capital – capital maintenance concepts; Limitations of Historic Cost accounting; Introduction to Fair Value accounting		
4	Final accounts of Trading Concern	Preparation of financial statements: of sole proprietorship business entities from a trial balance – Manufacturing, Trading, P/L A/c and Balance Sheet	15	15

5	Financial statements from Incomplete records and of NPO	Preparation of financial statements: a) from incomplete records b) of non-profit organisation	10	12
	Accounting for special sales transaction	 Consignment: Basic features; difference with sales. Recording in the books of Consignor – at cost & at invoice price, Valuation of unsold stock; Ordinary commission. Treatment and valuation of abnormal & normal loss. Special commission; Del credere commission (with and without bad debt) - use of Consignment Debtors A/C. Recording in the books of Consignee Accounting for sale on approval 		
6	Sectional and Self balancing ledger	 Concept of sectional balancing, preparation of control accounts. Self balancing Ledger: advantages; Recording process; preparation of Adjustment accounts. 	25	23
	Insurance claim for loss of stock and for loss of profit	 Loss of stock: Physical & ownership concept; concept of under-insurance and average clause; computation of claim – with price change; consideration of unusual selling line; price reduction etc. Loss of profit: Concept – insured & uninsured standing charges, GP rate, short sales and increased cost of working, average clause and computation of claim (simple type) 		

Relevant Accounting Standards issued by the Institute of Chartered Accountants of India are to be followed.

Suggested Reading:

- Sukla, Grewal, Gupta: Advanced Accountancy Vol. I, S Chand
- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. I, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. I, Vikash Publishing House Pvt. Ltd.
- Sehgal & Sehgal, Advanced Accountancy Vol. I, Taxman Publication
- B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
- Hanif & Mukherjee, Financial Accounting, McGraw Hill
- Frank Wood, Business Accounting Vol 1, Pearson
- Tulsian, Financial Accounting, Pearson
- Mukherjee and Mukherjee, Financial Accounting I, Oxford
- Accounting Standards issued by ICAI

Year 1: Semester II

		Marks	Credit Hours	
GE 2.1 Chg	E-Commerce & Business Communication (50+50)	100	6	
CC2.1 Chg	Company Law	100	6	
CC 2.2 Chg	Marketing Management and Human Resource Management	100	6	
CC 2.1Ch	Cost and Management Accounting - I	100	6	

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GE 2.1 Chg

E-Commerce & Business Communication (50+50)

Marks: 100

Internal Assessment: 20 marks Semester-end Examinations: 80 marks 100 marks Total

Marks shown against the units indicate marks for Semester-end Examinations

Module I

E-Commerce

Internal Assessment: 10 marks **Semester-end Examinations: 40 marks** 50 marks Total

Unit 1: Introduction

E-Commerce-meaning, nature, concepts, types; e-commerce business models B2B [concept, major activities, types of B to B market (independent, buyer oriented, supplier oriented, e-market place)], B2C [portals, e-tailer, content provider, transaction broker, real life examples of B2C], C2C, C2B, etc.; forces behind e-commerce, e-Governance [meaning, types, significance, real life examples].

Unit 2: E-CRM and SCM

E-CRM-definition, features, goals of E-CRM business framework, phases of E-CRM, types of E-CRM. Functional components of E-CRM, strategies for E-CRM solutions; SCM-definition, features, types of supply chain.

Unit 3: Digital Payment

Methods of e-payments [Debit Card, Credit Card, Smart Cards, e-Money], electronic or digital wallet, digital signature (procedures, working and legal provisions), payment gateways [Core Banking Solution or CBS, Mobile Payment, UPI, NCPI, International Payments], Online banking

[10 Marks, Class: 10]

[8 Marks, Class: 8]

[8 Marks, Class: 8]

[meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting], risks involved in e-payments.

Unit 4: ERP

[8 Marks, Class: 8]

Definition, features, major characteristics, levels of ERP, benefits of ERP, enterprise potential of ERP, modules of ERP, phases of ERP implementation, limitations of ERP.

Unit 5: New Trends in E-Commerce

[6 Marks, Class: 6]

Social Commerce-concept, definition, features; Digital Marketing-definition, objectives, methods, limitations; Advertisement in Social Media-objectives, advantages and disadvantages, procedures

Suggested Readings

- P. T. Joseph, *E-Commerce: An Indian Perspective*, PHI Learning
- Henry Chan, Raymond Lee, Tharam Dillon, Elizabeth Chang, *E-Commerce: Fundamentals and Applications*, Wiley.
- Laudon, *E-Commerce*, Pearson Education India
- Schneider G., E-Business, Cengage
- Bhaskar, B., E–Commerce, McGraw Hill

Module II

Business Communication

Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

Unit 1: Introduction

Definition, objectives, importance, elements, process, forms, models, principles of effective communication, barriers to communication and remedial measures, role of communication in conflict resolution

Unit 2: Types of Communication

Formal and informal communication, Grapevine, Characteristics of corporate communication, Characteristics of corporate communication, Communication network

Unit 3: Tools of Communication

Emergence of communication technology, Modern Forms of communication, Fax, E-mail, Video Conferencing

Unit 4: Drafting

Notice, Circular, Resolution & Minutes, Report, CV writing, Business letter writing- Offer letter, Quotation, Status enquiry, Confirmation, Execution, Refusal and cancellation of order, Recommendation, Credit collection, Claim, Bank loan

Suggested Readings

- Anjanee, S. & Bhavana Adhikari, Business Communication, TMH
- Chaturvedi & Chaturvedi, Business Communication : Concepts, Cases and Applications, ٠ Pearson
- M.K.Shegal &Vandana Khetarpal, Business Communication, Excel Books •
- R.K.Madhukar, Business Communication, Vikash Publishing House Pvt. Ltd.
- Rao, Kumar & Bindu, Business Communication, Cengage
- Khanna, Puja., Business Communication, Vikash
- Raman & Sharma, Technical Communication, Oxford
- Lesikar, Flatley et al, Business Communication, McGraw Hill

CC2.1 Chg

Company Law Marks: 100 **Internal Assessment:** 20 marks Semester-end Examinations: 80 marks Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: INTRODUCTION TO COMPANY[No of classes 16 / Marks 16]

Meaning and Definition - Features -, High Lights of Companies Act 2013 - Body Corporate ,Kinds of Companies (Concept, Definition and Features) – One Person Company, Private Company, Public Company, Company limited by Guarantee, Company limited by Shares, Holding Company, Subsidiary Company,

[8 Marks, Class: 8]

[6 Marks, Class: 6]

[6 Marks, Class: 6]

[20 Marks, Class: 20]

Government Company, Associate Company, Small Company, Foreign Company, Listed Company, Dormant company, Lifting of corporate veil.

Unit 2: FORMATION OF A COMPANY[No of classes 16 / Marks 16]

Steps in formation of a Company, Promotion Stage, Meaning of Promoter, Position of Promoter & Functions of Promoter, Incorporation Stage – Meaning, Contents, Forms of Memorandum of Association & Articles of Association and its alteration, Distinction between Memorandum of Association and Articles of Association, Doctrines of constructive notice and Indoor management, Certificate of Incorporation, Subscription Stage – Meaning & contents of Prospectus, Types, Misstatement in prospectus and its consequences.

Unit 3: COMPANY ADMINISTRATION[No of classes 16 / Marks 16]

Director (Concept and Definition), DIN, Qualification, Disqualification, Appointment, Position, Rights, Duties, Power, Resignation, Liabilities, Removal and Resignation of director. Key Managerial Personnel (Definition, Appointment and Qualifications) – Managing Director, Whole time Directors, the Companies Secretary, Chief Financial Officer, Resident Director, Independent Director, Women director.

Unit 4: SHARE CAPITAL & DEBENTURE[No of classes 16 / Marks 16]

Share, Share Capital - Types and Definition, Allotment and Forfeiture, Calls on Shares, ESOP, Buyback, Sweat Equity, Bonus, Right, Capital Reduction, Share Certificate, D-mat System, Transfer and Transmission, Redemption of Preference Shares, Debenture – Definition, Types, Rules Regarding Issue of Debenture.

Unit 5: CORPORATE MEETINGS[No of classes 16 / Marks 16]

Corporate Meetings - Shareholder and Board, Types of Meetings – Annual General Meeting Extraordinary General meeting, Minutes of Proceedings of General Meeting, Meeting of BOD and other meetings (Section 118), Requisite of Valid Meeting- Notice, Agenda, Chairman, Quorum, Proxy, Resolutions, Minutes, Postal Ballot, E- voting, Video Conferencing, Board Meetings and Resolutions

(If any new provisions are enacted in place of the existing provisions, the syllabus will accordingly include such new provisions in place of existing provisions with effect from such date as prescribed by Calcutta University. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus)

Suggested Readings

- Kumar Rabindra, Legal Aspects of Business, Cengage
- Bhadra, Satpati and Mitra, Ainer Ruprekha (Bengali Version), Dishari
- Kapoor, N.D., Corporate Law, S.Chand
- Arora, Bansal, Corporate Law, Oxford
- Roychowdhury, Bhattacharjee & Datta, Business Regulatory Framework, Elegant Publishers

CC 2.2 Chg Marketing Management and Human Resource Management Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I Marketing Management Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> <u>Total 50 marks</u>

Unit 1: Introduction:

No. of classes: 8 / Marks: 8

Nature, scope and importance of marketing; Selling vs Marketing; Marketing mix, Marketing environment: concept, importance, and components (Economic, Demographic, Technological, Natural, Socio-Cultural and Legal).

Unit 2: Consumer Behaviour and Market segmentation:

No. of classes: 8 / Marks: 8

Consumer Behaviour: Nature and Importance, Factors influencing consumer buying behaviour. Market segmentation: concept, importance and bases; Product differentiation vs. market segmentation.

Unit 3: Product:

No. of classes: 8 / Marks: 8

Concept and importance, Product classifications; Concept of product mix; Branding, packaging and labeling; Product life-cycle; New Product Development Process.

Unit 4: Pricing, Distribution Channels and Physical Distribution

No. of classes: 8 / Marks: 8

Pricing: Significance. Factors affecting price of a product. Pricing policies and strategies. Distribution Channels and Physical Distribution: Channels of distribution - meaning and importance; Types of distribution channels; Factors affecting choice of distribution channel.

Unit 5: Promotion and Recent developments in marketing:

No. of classes: 8 / Marks: 8

Promotion: Nature and importance of promotion; Communication process; Types of promotion: advertising, personal selling, public relations & sales promotion, and their distinctive characteristics. Recent developments in marketing: Social Marketing, online marketing, direct marketing, services marketing, green marketing, Rural marketing; Consumerism.

Suggested Readings:

- Kotler & Keller, Marketing Management, Pearson
- Ramaswamy and Namakumari, Marketing Management, McMillan
- Bhagwati, Pillai, Marketing Management, S.Chand
- Verma & Duggal, Marketing Management, Oxford
- Venugopal, P., Marketing Management, Sage
- Saxena, Marketing Management, McGraw Hill

Module II

Human Resource Management

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: Nature and Scope

No. of classes: 8 / Marks: 8

Concept and meaning of HR, Understanding the Nature and Scope of HRM, Functions and importance.

Unit 2: Human Resource Planning

No. of classes: 8 / Marks: 8

Definition, Need and Features of Human Resource Planning, factors affecting Human Resource Planning.

Unit 3: Recruitment and Selection

No. of classes: 8 / Marks: 8

Definition of Recruitment, Source, need and importance of Recruitment, Recruitment Policy – process – sources of Recruitment Definition of Selection, Steps in selection.

Unit 4: Training and Development

No. of classes: 8 / Marks: 8

Training and Development Meaning and purpose of training, Benefits of training to organisation and employees -Training methods.

Unit 5: Job Evaluation and Performance Appraisal

No. of classes: 8 / Marks: 8

Job evaluation - objectives, scope, method, Job analysis, Job description, Job Specification - basic concept and significance,

Performance Appraisal - Concept

Suggested Readings:

- Mahajan, Reeta, Human Resource Management, Vikash
- Haldar & Sarkar, Human Resource Management, Oxford
- Sinha, Sekhar & Bala, Human Resource Management, Cengage
- Jyothi & Venkatesh, Human Resource Management, Oxford
- Wilton, N., An Introduction to Human Resource Management, Sage
- Dessler & Varkkey, Human Resource Management, Pearson

CC 2.1Cg COST AND MANAGEMENT ACCOUNTING – I

Marks 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

COST AND MANAGEMENT ACCOUNTING-I

Unit	Торіс	Content	Marks	Lecture
		MODULE - I		
1.	Introduction	 Definition of Costing, Objectives of Cost Accounting; Installing a Cost Accounting System, Essentials of a good Cost Accounting System. Cost concepts, terms and classification of costs: Cost, Cost object, Cost units and Cost Centres, Types of costs, classification of costs- Direct-Indirect, Elementwise, Functionwise, Behaviourwise. Costing Methods and Techniques (introduction only). 	10	6
2	Material Costs	 Purchase of materials: Organisation, purchase procedure, documentation. Storage of materials: Need for storage, functions of a storekeeper, storage record, accounting for materials cost. Materials control: Organisation; Tools: Just-in-Time Purchase; various stock levels, Economic Ordering Quantity; Periodic Inventory, Perpetual Inventory, Physical verification. Methods of Pricing Material Issues: FIFO, LIFO, Weighted Average. 	10	10
3	Employee Cost and Incentive Systems	 Introduction, Recording labour cost: Attendance and payroll procedures (Time-keeping, Time-Booking, Payroll procedure, Payment of wages-Piece rate, differential piece rate, time rate), Idle time (causes and treatment in Cost Accounting), Overtime (its effect and treatment in Cost Accounting). Main Principles for sound system of wage incentive schemes-(Halsey, Halsey-weir, Rowan); System of Wage Payment and Incentives. 	10	12
4	Overhead And Presentation of Cost	 Overhead Introduction: Definition, Classification of Overhead- Functional and Behavioural. Manufacturing Overheads: Allocation and apportionment of Overhead; Absorption of Overhead: various methods and their application; Treatment of under absorption/over absorption of overheads; Basic concepts of different Capacities. Preparation of Cost Sheet (single product only) 	20	20
	Cost Book- keeping	Non-Integrated System: Meaning & Features; Ledgers Maintained; Accounts prepared; General/Cost Ledger Adjustment Account; Meaning of Closing Balance in	10	8

	Various Accounts (Simple type) Reconciliation: Need for reconciliation; Items causing differences between Cost and Financial Profits and their reconciliation.		
Costing Methods	 Job Costing and Batch Costing Contract Costing - Progress payments, Retention money, Escalation clause, Contract accounts, Accounting for material, Accounting for plant used in a contract, Contract Profit. Service Costing - Introduction; Motor Transport Costing only Process Costing: Meaning, Features, Process vs Job Costing, Normal loss, Abnormal loss and gain and preparation of process accounts. 	20	24
	Total	80	80

Suggested Readings

- Horngren, Datar & Rajan, Cost Accounting, A Managerial Emphasis, Pearson
- B.Banerjee, Cost Accounting, PHI
- Jawahar Lal & Seema Srivastava, Cost Accounting, TMH
- M.Y.Khan & P.K.Jain, Management Accounting, TMH
- Atkinson, Management Accounting, Pearson
- Bhattacharyya, Ashish K., Cost Accounting for Business Manageres, Elsevier
- Ravi M Kishore, Cost and management Accounting, Taxmann
- Mitra, J.K., Cost & Management Accounting, Oxford
- Hanif, M., Cost & Management Accounting, McGraw Hill
- Drury, Colin., Management and Cost Accounting, Cengage
- Satish Inamdar, Cost & Management Accounting, Everest Publishing House
- Bhattacharyya, Ashish K., Cost Accounting for Business Manageres, Elsevier
- Ravi M Kishore, Cost and management Accounting, Taxmann

	Marks	Credit Hours	
Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100	4	
Business Mathematics & Statistics	100	6	
Financial Accounting II	100	6	
	Information Technology & Its Application in Business (Theory -50 + Practical- 50) Business Mathematics & Statistics Financial Accounting II	MarksInformation Technology & Its Application in Business (Theory -50 + Practical- 50)100Business Mathematics & Statistics100Financial Accounting II100	MarksCredit HoursInformation Technology & Its Application in Business (Theory -50 + Practical- 50)1004Business Mathematics & Statistics1006Financial Accounting II1006

Year 2: Semester III

SEC 3.1 Chg Information Technology & Its Application in Business (Theory -50 + Practical- 50) Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total</u> 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I Information Technology and Its Application in Business (Theory) (Marks: 50) Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit1: Information Technology and Business

Concepts of data, information and computer based information system, impact of information technology on business [business data processing, intra-organizational and inter-organizational communication by using network technology, business process outsourcing and knowledge process outsourcing], types of Information System-Transaction Processing System (TPS), Management Information System (MIS), Decision Support System (DSS), Knowledge Management System (KMS) and their implementation at managerial levels [operational, tactical and strategic].

Unit 2: Data Organization and Data Base Management System [10 Marks, Class: 10]

(a) **Data Organisation**: Character, field, record, file and database, types of data processing systems [Serial, Batch, Real-time, Online, Centralized, Distributed], File Organizations [Sequential, Direct, Indexed-Sequential, Relative], Traditional file organisation vs. Database file organisation.

(b) Database Management System: Concept of database management system (DBMS), definition, importance of DBMS, important terms of database [Entity, Attribute, Keys- Primary, Foreign and Candidate, Referential Integrity, Table, Views, Data Dictionary], types of database [Hierarchical, Network and Relational], basic ideas of Data Warehouse and Data Mining (definition, importance, advantages and disadvantages), Big data analysis- Concept.

Unit 3: Internet and Its Applications

Meaning of Internet, IPAddress [IPv4, IPv6], URL, Domain Name System, Internet Protocols - TCP/IP, UDP, FTP, TELNET[brief ideas only], HTML, DHTML AND XML [Concepts only], Ethical Hacking, Cloud Computing, Mobile Computing, Internet of Things, Ethical issues in Social Networking.

Unit 4: Security and Encryption

Need and concepts, dimension, definition and scope of e-security, security threats- Malicious Codes (Virus, Trozan Horse, Worm, Spyware, Ransomware), Hacking, Spoofing, Sniffing, Phishing, Spamming, Denial of Service (DoS) attacks, Technology solutions [Confidentiality: (Data Encryption & Decryption, Symmetric and asymmetric encryption), Security Implementation: Firewall, DMZ (De Militarized Zone), SSL, HTTPs, Significance of Website Auditing].

[8 Marks, Class: 8]

[8 Marks, Class: 8]

[8 Marks, Class: 8]

Unit 5: IT Act. 2000 and Cyber Crimes

IT Act 2000- Definitions of different terms, Digital signature, Electronic Governance, Attribution, Acknowledgement and Dispatch of Electronic Records, Regulation of Certifying Authorities, Digital Signatures Certificates, Duties of Subscribers, Penalties and Adjudication, Appellate Tribunal, Offences and Cyber-crimes.

Module II

Information Technology and Its Application in Business (Practical)

(Marks: 50) Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> <u>Total 50 marks</u>

Unit 1: Word Processing

Working with word document- Editing text, Find and Replace text, Formatting, Spell check, Autocorrect, Auto text; Bullets and numbering, Tabs, Paragraph Formatting, Indent, Page Formatting, Header and footer, Macros, Drop cap; Tables: Inserting, Filling and formatting a Table, Inserting Pictures and Video; Mail Merge- including linking with Database, Printing documents.

Creating Business Documents using the above facilities

Unit 2: Preparing Presentations

Basics of presentations: Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols, Media; Design; Transition; Animation, Hyperlink and Slideshow.

Creating Business Presentations using above facilities.

Unit 3: Spreadsheet and its Business Applications

Managing worksheets- Formatting, Entering data, Editing, and Printing a worksheet; Handling operators in formula, Project involving multiple spreadsheets, Organizing Charts and graphs, Pivot Table.

Spreadsheet Functions: Mathematical [SUMIF, SQRT, SUBTOTAL, SUMPRODUCT etc.], Statistical [AVERAGE, STDEV, VAR, CORRELATION, REGRESSION etc.], Financial [PMT, RATE, PV, FV, NPER, IRR, NPV, Data Table Etc.] Logical [AND, OR, IF etc.], Date and Time, lookup and reference, Database and Text functions.

Creating Spreadsheet in the area of: Loan and Lease statement; Ratio Analysis; Payroll Statements; Capital Budgeting; Depreciation Accounting; Graphical Representation of Data; Frequency Distribution and its Statistical Parameters; Correlation and Regression

Unit 4: Database Management System

Creation of Tables, Multiple Table Handling-Defining Relationship [Foreign Key], Simple and Conditional Queries, Types of Queries [Update, Delete, Append], Forms, Reports, Introduction to SQL through Basic Commands.

Applying DBMS in the areas of Accounting, Inventory, HRM and its accounting, Managing the data records of Employees, Suppliers and Customers.

[6 Marks, Class: 6]

[5 Marks, Class: 5]

[5 Marks, Class: 5]

[16Marks, Class: 16]

[8 Marks, Class: 8]

Unit 5: Website Designing

Introduction to HTML; Tags and Attributes: Text Formatting, Fonts, Hypertext Links, Tables, Images, Lists, Forms, Frames, Cascading Style Sheets.

Suggested Readings

- Thareja, IT & Application, Oxford
- Aurora, Computer Fundamentals, Vikash
- Sinha & Sinha, Fundamentals of Computers, BPB Publications
- Dhar, P., Fundamental of IT and Its Application in Business, APH

GE 3.3 Chg Business Mathematics & Statistics Marks 100

Module I Business Mathematics Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

- Permutations and Combinations: Definition, Factorial Notation, Theorems on Permutation, Permutations with repetitions, Restricted Permutations; Theorems on Combination, Basic identities, Restricted Combinations. [8 L /8Marks]
- 2 **Set Theory**: Definition of set, Presentation of sets, Different types of sets- Null set, Finite and infinite Sets, Universal set, Subset, Power set etc.; Set Operations, Law of algebra of Sets.

[8 L /8Marks]

- Binomial Theorem: Statement of the theorem for positive integral index, General term, Middle term, Simple properties of binomial coefficients. [8 L /8Marks]
- 4 Logarithm: Definition, Base and Index of Logarithm, General properties of Logarithm, Common Problems.
 [8 L /8Marks]
- Compound Interest and Annuities:Simple AP and GP Series, Different types of interest rates, Net present value, Types of annuities, Continuous compounding, Valuation of simple loans and debentures, Problems relating to Sinking Funds. [8 L /8Marks]

[6 Marks, Class:6]

Module II Statistics

Internal Assessment: 10 marks Semester-end Examinations: 4<u>0 marks</u> Total 50 marks

- 6. Correlation and Association:Bivariate data, Scatter diagram, Pearson's correlationcoefficient, Spearman's rank correlation, Measures of association of attributes. [8 L /8Marks]
- **7. Regression Analysis:** Least squares method, Simple regression lines, properties of regression, Identification of regression lines.[8 L /8Marks]
- 8. Index Numbers: Meaning and types of index numbers, Problems of constructing index numbers, Construction of price and quantity indices, Test of adequacy, errors in index numbers, Chain base index numbers; Base shifting, Splicing, Deflating, Consumer price index and its uses.
 [8 L /8Marks]
- 9. Time Series Analysis: Causes of variation in time series data, Components of time series, additive and multiplicative models, Determination of trend by semi-average, moving average and least squares(of linear, quadratic and exponential trend) methods; Computation of seasonal Indices by simple average, ratio-to-moving average, ratio-to-trend and link relative methods; Simple forecasting through time series data. [8 L/8Marks]
- **10. Probability Theory:** Meaning of probability; Different definitions of probability; Conditional probability; Compound probability; Independent events, Simple problems. [8 L /8Marks]

Suggested Readings

- Business Mathematics and Statistics- N G Das & J K Das (Tata McGraw Hill)
- Statistics for Business Decisions J. K .Das (Academic Publishers)
- Basic Mathematics and its Application in Economics S. Baruah (Macmillan)
- Mathematics for Economics and Business R. S. Bhardwaj (Excel Books)
- Mathematics and Statistics for Management K B Akhilesh and S Balasubrahmanyam (Vikash Publishing House Pvt.Ltd.)
- Business Statistics G. C. Beri (Tata McGraw Hill)
- Fundamentals of Statistics S.C.Gupta (Himalaya Publishing House)
- Statistics for Business and Economics D. R. Anderson, D. J. Sweeney and T. A.
- Williams (Thomson Asia Pvt Ltd)
- Text Book of Business Mathematics , Padmalochan Hazarika, S.Chand
- Business Mathematics, Jameeruddin, Khanna & Bhamdri, Vikash
- Business Mathematics & Statistics J. Chakraborti (Dey Book Concern)
- Business Mathematics & Statistics R K Ghosh & S Saha (New Central Book Agency(P) Ltd
- Rajaretnam, Statistics for Social Sciences, Sage
- Elementary Business Mathematics & Statistics Dr. Priyotosh Khan (Elegant Publication)
- Business Mathematics & Statistics Dr. S N De (Chhaya Prakashani)
- Business Mathematics & Statistics N K Nag & S K Nag (Kalyani Publishers)
- Business Mathematics & Statistics Dr. Ranjit Dhar (Dishari Prakashani)

CC3.1Cg FINANCIAL ACCOUNTING – II Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u> Marks shown against the units indicate marks for Semester–end Examinations

Unit	Торіс	Details	Marks allotted	No. of lectures
1	Partnership accounts-I	Correction of appropriation items with retrospective effect. Change in constitution of firm – change in P/S ratio, admission, retirement and retirement cum admission – treatment of Goodwill, revaluation of assets & liabilities (with/without alteration of books), treatment of reserve and adjustment relating to capital; treatment of Joint Life Policy, Death of a partner	15	15
2	Partnership accounts-II	Accounting for dissolution of firm – insolvency of one or more partner, consideration of private estate and private liabilities. Piecemeal distribution – surplus capital basis; maximum possible loss basis.	15	15
3	Branch accounting	Concept of Branch; different types of Branches. Synthetic method – preparation of Branch account. Preparation of Branch Trading and P/L account. (at cost & at IP) – normal and abnormal losses. Analytical method – preparation of Branch Stock, Adjustment etc A/C (at cost & at IP) – normal & abnormal losses Independent branch – concept of wholesale profit	10	10
4	Hire purchase and Instalment payment system	 Meaning; difference with Installment payment system; Recording of transaction in the books of buyer – allocation of interest – use of Interest Suspense a/c – partial and complete repossession Books of Seller – Stock and Debtors A/C (with repossession) Books of Seller – H.P. Trading A/C without HP Sales and HP Debtors and General Trading A/c (with repossession) 	10	10

		Concept of operating and financial lease – basic concept only.		
5	Departmental accounts	Concept, objective of preparation of departmental accounts; apportionment of common cost; Preparation of Departmental Trading and P/L account, Consolidated Trading and P/L account; inter departmental transfer of goods at cost, cost plus and at selling price and elimination of unrealized profit.	10	10
6	Investment Accounts	Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.	10	10
7	Business Acquisition and Conversion of partnership into limited company	 Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company – with and without same set of books 	10	10
			80	80

Relevant Accounting Standards issued by the Institute of Chartered Accountants of India are to be followed.

Suggested Reading

- Sukla, Grewal, Gupta: Advanced Accountancy Vol. I & II, S Chand
- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. I & II, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. I & II, Vikash Publishing House Pvt. Ltd.
- Sehgal & Sehgal, Advanced Accountancy Vol. I & II, Taxman Publication
- L.S.Porwal, Accounting Theory, Tata Mcgraw Hill
- Gokul Sinha, Accounting Theory & Management Accounting,
- B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
- Frank Wood, Business Accounting Vol 1&II, Pearson
- Tulsian, Financial Accounting, Pearson
- Hanif & Mukherjee, Financial Accounting, Vol II, McGraw Hill
- Accounting Standards issued by ICAI
GE 4.1 Chg

Microeconomics-II & Indian Economy (50+50)

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module IMicroeconomics-IIInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit: I Monopoly

Concept of Monopoly: Sources of monopoly power; Short-run and Long-run equilibrium of a monopoly firm; Price discrimination; Social Cost of Monopoly (concept only). [L 10/ Marks:10]

Unit: II Imperfect Competition

Concept of Imperfectly Competitive market; Monopolistic Competition: Features and examples; Oligopoly: Non-Collusive Oligopoly: Sweezy's Kinked demand Curve Model, Collusive Oligopoly: Cartel (concept with example) [L 15/ Marks:15]

Unit: III Factor Price Determination

Introduction; Marginal Productivity Theory of Distribution; Marginal Productivity Theory of Wage, Demand Curve of Labour, Supply Curve of Labour; Wage Determination in an Imperfectly Competitive Labour Market: Case of Collective Bargaining, Factors determining the power of trade unions to raise wages; Theory of Rent: Ricardian Theory of Rent, Modern Theory of Rent, Quasirent; Theory of Profit: Gross Profit and Net Profit, Accounting Profit and Normal Profit, Different Theories of Determination of Profit; Concept of Interest: Gross Interest and Net Interest, Classic Theory of Interest Rate Determination. [L 15/ Marks 15]

Suggested Readings

- Pindyke and Rubinfeld, Micro Economics, Pearson
- Gold & Ferguson, Micro Economic Theory
- Banerjee & Majumdar, Business Economics and Business Environment, ABS
- Banerjee & Majumdar, Banijjik Arthaniti -o- Banijjik Paribesh(Bengali), ABS
- Ratan Khasnabish & Ranesh Roy, Banijjik Arthaniti -o- Bharoter arthanaitik Paribesh(Bengali)
 - Divedi, D.N., Managerial Economics, Vikash Publications
 - Mankiw.N.G., Principles of Microeconomics, Cengage
 - Das, P. & Sengupta A., Economics , Oxford
 - Samuelson & Nordhaus, Macroeconomics, McGraw Hill

Module II Indian Economy

Internal Asse	ssment:	10 marks
Semester-end	Examina	ations: 4 <u>0 marks</u>
	Total	50 marks

Unit: I Basic Issues in Economic Development

Concepts and measures of development and underdevelopment; Concept of national income: GDP,GNP,NDP,NNP,NI (concepts only). [L 5/ Marks:5]

Unit:II Basic Features of Indian Economy

Sectoral distribution of National Income and Occupational Structure; Structural Change in Indian Economy, issue of Service-led Growth. [L 10/ Marks:10]

Unit:III Sectoral Trends and Issues

(a) **Agricultural Sector**: Problem of low productivity; Green Revolution and its impact; Land Reforms; Problems of rural credit and marketing.

(b) **Industry and Service Sector**: An overview of industrial growth during pre-reform and post-reform period; Role of Public Sector: its performance and the issue of disinvestment; Role of MSME sector, problems faced by the MSME Sector; Role of the Service Sector: growth of banking and insurance sector during the post-reform period.

(c) External Sector: Problem of unfavourable balance of payments and policy measures.

[L 15/ Marks:15]

Unit:IV Social Issues in Indian Economy

Problem of Poverty, Poverty alleviation measures; Problem of Unemployment and the policy measures. [L 10/ Marks:10]

Suggested Readings

•Dutt & Sundaram, Indian Economy, S.Chand

- Mishra & Puri, Indian Economy, Himalaya Publishing House
- Uma Kapila, Indian Economy
- Joydeb Sarkhel & Swapan Kr. Roy, Bharoter arthanaiti(Bengali)
- Banerjee & Majumdar, Business Economics and Business Environment, ABS
- Banerjee & Majumdar, Banijjik Arthaniti -o- Banijjik Paribesh(Bengali), ABS
- Ratan Khasnabish & Ranesh Roy, Banijjik Arthaniti -o- Bharoter arthanaitik Paribesh(Bengali)
 - Prakash, B.A., Indian Economy, Pearson
 - Fernando, Indian Economy, Pearson

CC 4.1 Chg Entrepreneurship Development and Business Ethics Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I Entrepreneurship Development Internal Assessment: 10 marks Semester-end Examinations: <u>40 marks</u> <u>Total 50 marks</u>

Unit-1: Introduction: No. of classes: 10 / Marks: 10

Meaning, elements, determinants and importance of entrepreneurship and creative behavior; Entrepreneurship and Micro, Small and Medium Enterprises, Role of family business in India; The contemporary role models in Indian business: their values, business philosophy and behavioural orientations; Conflict in family business and its resolution.

Unit-2:

No. of classes: 10 / Marks: 10

Public and private system of stimulation, support and sustainability of entrepreneurship. Requirement, availability and access to finance, marketing assistance, technology, and industrial accommodation, Role of industries/entrepreneur's associations and self-help groups, The concept, role and functions of business incubators, angel investors, venture capital and private equity fund.

Unit-3:

No. of classes: 10 / Marks: 10

Sources of business ideas and tests of feasibility. Significance of writing the business plan/ project proposal; Contents of business plan/ project proposal; Designing business processes, location, layout, operation, planning & control; preparation of project report

Unit-4:

No. of classes: 10 / Marks: 10

Mobilizing Resources (10 Lectures) Mobilizing resources for start-up. Accommodation and utilities; Preliminary contracts with the vendors, suppliers, bankers, principal customers; Basic start-up problems;

Module II Business Ethics

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: Business Ethics

No. of classes: 8 / Marks: 8

Introduction – Meaning - Scope – Types of Ethics – features – Factors influencing Business Ethics – significance of Business Ethics - Arguments for and against business ethics- Basics of business ethics - Corporate Social Responsibility and Business Ethics

Unit 2: Principles of Business Ethics No. of classes: 8 / Marks: 8

Introduction – Meaning – Element – Ethics, Morale, Business ethics, Ethical dilemma [basic idea, features and significance of each of element]

Unit 3: Ethics in Management

No. of classes: 8 / Marks: 8

Introduction – Ethics in HRM – Ethics in Marketing — Ethics in Accounting and finance - Work place Ethics - Value and Ethics.

Unit 4: Corporate Culture

No. of classes: 8 / Marks: 8

Meaning – Role – Functions – Impact of Corporate Culture – Globalization and cross culture issues in ethics, Corporate Code of ethics

Unit 4: Ethics & Corporate Governance

No. of classes: 8 / Marks: 8

Concept of Corporate Governance, Scope, Reports on Corporate Governance and its benefits and limitations-- Corporate Governance and Business Ethics [Brief Concept]

Suggested Readings:

- Kuratko and Rao, *Entrepreneurship: A South Asian Perspective*, Cengage Learning.
- Robert Hisrich, Michael Peters, Dean Shepherd, *Entrepreneurship*, McGraw-Hill Education
- Desai, Vasant. Dynamics of Entrepreneurial Development and Management. Mumbai,
- Himalaya Publishing House.
- Dollinger, Mare J. Entrepreneurship: Strategies and Resources. Illinois, Irwin.
- Holt, David H. Entrepreneurship: New Venture Creation. Prentice-Hall of India, New Delhi.
- Plsek, Paul E. Creativity, Innovation and Quality. (Eastern Economic Edition), New Delhi:
- Prentice-Hall of India. ISBN-81-203-1690-8.
- Singh, Nagendra P. *Emerging Trends in Entrepreneurship Development*. New Delhi:

ASEED.

- SS Khanka, Entrepreneurial Development, S. Chand & Co, Delhi. ٠
- Hifrich, Manimala, Peters & Shepherd, Entrepreneurship, McGraw-Hill
- Kumar Arya, Entrepreneurship, Pearson •
- Bamford and Bruton, Entrepreneurship, McGraw Hill •
- SIDBI Reports on Small Scale Industries Sector. •
- Roy, Entrepreneurship, Oxford
- Albuquerque, Business Ethics, Oxford ٠
- Ferrell, Fraedrich, Farrell, Business Ethics, Cengage •

Note: Latest edition of text books may be used.

CC 4.1 Cg

TAXATION-I

Full Marks – 100

Internal Assessment: 20 marks Semester-end Examinations: 80 marks 100 marks Total

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1 :	a)	Basic Concepts and Definitions under IT Act
		Assessee, Previous year, Assessment year, Person, Income, Sources of
		income, Heads of income, Gross total income, Total income, Maximum
		marginal rate of tax, Tax Evasion, Tax avoidance, Tax planning.
	b)	Residential Status and Incidence of Tax
	-	Residential status of all persons except company
	c)	Incomes which do not form part of Total Income
		Except section 10AA.
	d)	Agricultural Income
		Definition, determination of agricultural and non-agricultural Income.
		(L-10 / M-10)
Unit 2 :	Hea	ds of Income and Provisions governing Heads of Income
	a)	Salaries
	b)	Income from House property (L-30 / M-30)
Unit 3 :	Hea	ds of Income and Provisions governing Heads of Income
	a)	Profits and Gains of Business or Profession
		Special emphasis on sec. 32, 32AC, 32AD, 35, 35D, 36(1)(2), (iii), (vii)
		37, 37(2B), 40A(2), 40A(3), 43B, (Excluding presumptive taxation)
	b)	Capital Gains
		Meaning and types of capital assets, basic concept of transfer, cost of
		acquisition, cost of improvement and indexation, computation of STCG
		and LTCG, exemptions u/s 54, 54EC and 54F, capital gain on transfer of
		bonus shares, right entitlement and right shares, taxability of STCG and
		LTCG.
	c)	Income from Other Sources

Basis of charge excluding deemed dividend (L-25 / M-25)

- Unit 4 :
- a) Income of other Persons included in Assessee's Total Income Remuneration of spouse, income from assets transferred to spouse and Son's wife, income of minor.
- b) Set off and Carry Forward of Losses Mode of set off and carry forward, inter source and inter head set off, carry forward and set off of losses u/s 71B, 72, 73, 74, 74A.
- c) Deductions from Gross Total Income Basic concepts, deductions u/s 80C, 80CCC, 80CCD, 80CCE, 80D, 80DD, 80DDB, 80E, 80G, 80GGC, 80TTA, 80U
 d) Rebate u/s 87A (L-15 / M-15)

d) Rebate u/s 87A (L-15 / M-15) If any new legislations/provisions are enacted in place of the existing legislations/provisions, the syllabus will accordingly include such new legislations/provisions in place of existing legislations/provisions with effect from such date as prescribed by CALCUTTA UNIVERSITY. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus. Suggested Readings

- Singhnia V.K., and Singhania K, Direct Tax Law and Practice, Taxmann
- Lal and Vashist, Direct Taxes, Pearson
- Ahuja and Gupta, Direct Taxes Law And Practice, Bharat
- Manoharan & Hari, Direct Tax Laws, Snow White
- Roy, S. K., Principles and Practice of Direct & Indirect Taxes, ABS
- Sengupta, C.H., Direct & Indirect Taxes, Dey Book Concern

Latest edition of the books may be read.

CC 4.2 Cg Cost and Management Accounting -II Full Marks – 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Unit	Торіс	Content	Marks	Lecture
1	Joint Product and By products	Concept of Joint products and by-products; Apportionment of common costs to joint products, and costing of By Products.	20	18
	ABC	Problems of traditional costing; meaning of Activity Based Costing; cost analysis under ABC; advantages and disadvantages.	20	10
2	Budget and Budgetary Control	Budget and Budgetary Control; principal budget factor, preparation and monitoring procedures, Fixed and Flexible budget, preparation of cash budget, flexible budget.	10	12

3	Standard Costing	Standard Costs and Standard Costing; Uses, & Importance. Differences with Budgetary Control, Preliminary Steps. Classification of Standards. Analysis and computation of Materials, Labour and Overhead Cost (concepts only) variance.	20	20
4	CVP Analysis, Marginal Costing	CVP Analysis Introduction; CVP Assumptions and Uses; Break-Even Analysis: BE Point and Margin of Safety; Graphical presentation of CVP Relationship; Profit Graph Marginal Costing and Management Decisions – Marginal Costing vis-à-vis Absorption Costing; Cost statement under marginal costing and absorption costing; Marginal Costing Techniques. Problems relating above areas	20	15
5	Short term Decision	Marginal costing Techniques; Marginal Cost and product Pricing; Product Mix and Make or Buy Decisions (simple Type).	10	15
			80	80

Suggested Readings

- Horngren, Foster & Rajan, Cost Accounting, A Managerial Emphasis, Pearson
- B.Banerjee, Cost Accounting, PHI
- Jawahar Lal & Seema Srivastava, Cost Accounting, TMH
- M.Y.Khan & P.K.Jain, Management Accounting, TMH
- Atkinson, Management Accounting, Pearson
- Bhattacharyya, Ashish K., Cost Accounting for Business Manageres, Elsevier
- Ravi M Kishore, Cost and management Accounting, Taxmann
- Hanif, M., Cost and Managment Accounting, TMH
- Mitra, J.K., Cost and Management Accounting, Oxford
- Drury, C., Management and Cost Accounting, Cengage

Year 3: Semester V

		Marks	Credit Hours	
CC 5.1 Cg	Auditing & Assurance	100	6	
DSE 5.1 A*	Taxation II	100	6	
DSE 5.2 A*	Corporate Accounting	100	6	
			18	

CC 5.1Cg Auditing & Assurance Full Marks – 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

UNIT – I CONCEPT, NEED AND PURPOSE OF AUDIT

(10M 10L)

- Definition-Nature-Scope and Objectives of Independent Financial Audit
- Basic Principles Governing an Audit- Concept of Auditor's Independence
- Errors and Fraud-Concepts, Means of Doing Fraud, Auditor's Responsibility towards Detection and Prevention of Fraud.
- Classification of Audit- Organization Structure wise (Statutory, Non-statutory); Objective wise (Internal and Independent Financial Audit); Periodicity wise (Periodical, Continuous, Interim, Final)
- Standards on Auditing (SA)- Concept and Purpose

(This unit should be studied with SA 200 and SA 240)

UNIT – II AUDIT PROCEDURES AND TECHNIQUES (15M 15L)

- Auditing Engagement-Audit Planning- Audit Programme (Definitions)
- Documentation: Audit Working Paper, Ownership and Custody of Working Papers-Audit File (Permanent and Current) – Audit Note Book- Audit Memorandum.
- > Audit Evidence Concept, Procedures to Obtain Audit Evidence
- > Routine Checking, Test Checking and Auditing in Depth
- > Audit of Educational Institutions and Hospitals

(This unit should be studied with SA 210, SA 230, SA 300, SA 500, SA 520 and SA 530)

UNIT – III INTERNAL CONTROL SYSTEM

- Internal Control- Definition, Objectives
- Internal check-Definition, Objectives
- > Internal Audit- Definition, Objectives, Reliance by Statutory Auditor on Internal Auditor's Work

(This unit should be studied with SA 610)

UNIT – IV VOUCHING, VERIFICATION AND VALUATION (10M 10L)

Vouching - Meaning, Objectives – Factors to be Considered during Vouching - Vouching of Following Items: i) Receipts: Cash Sale, Collection from Debtors, Interest and Dividend from Investment, Sale of Fixed Assets. Ii) Payments: Cash Purchase, Payment to Creditors, Payment of Wages and Salaries, Advertisement Expenses, Travelling Expenses

(10M

10L)

Verification and Valuation – Concept, Objectives, Importance, Difference with Vouching, Difference between Verification and Valuation, Verification of Following Items: i) Non-Current Assets: Goodwill, Patent and Copy Right, Plant and Machinery, ii) Investments iii) Current Assets: Inventory, Loan and Advance, Cash and Bank Balances iv) Non-current Liability: Secured Loan v) Current Liability: Trade Payables (Sundry Creditors).

UNIT - V COMPANY AUDIT

- > Qualification, Disqualification, Appointment and Rotation, Removal and Resignation,
- Branch Audit and Joint Audit
- Depreciation Concept and Provisions of the Companies Act
- Divisible Profit and Dividend (Final, Interim and Unclaimed/Unpaid): Provisions of the Act, Legal Decisions and Auditor's Responsibility.

UNIT - VI AUDIT REPORT AND CERTIFICATE (10M 10L)

- > Definition Distinction between Report and Certificate- Different types of Report
- Contents of Audit Report (As per Companies Act and Standards on Auditing)
- ➢ True and Fair View − Concept
- ➢ Materiality − Concept

(This unit should be studied with SA 700)

UNIT – VII OTHER THRUST AREAS (10M 10L)

- Cost Audit Concepts, Objectives Relevant Provisions of Companies Act
- Management Audit Concepts, Objectives, Advantages
- Tax Audit Social Audit Propriety Audit Performance Audit Environment Audit (Concepts only)

Notes and Appendices

Notes:

- 1) The provisions of the Companies Act, 1956 which are still in force would form part of the syllabus till the time their corresponding or new provisions of the Companies Act, 2013 are enforced.
- 2) If new Laws or Rules are enacted in place of the existing laws and rules, the syllabus would include the corresponding provisions of such new laws and rules with immediately following Academic Year.
- **3**) Students are expected to develop analytical mind for answering problem based questions along with the theoretical questions.

Suggested Readings:

- Gupta & Arora, Fundamentals of Auditing, TMH
- Tandon et al, Practical Auditing, S.Chand
- Jha, A., Auditing, Taxmann
- Basu, S. K., Auditing and Assurance, Pearson
- Ghosh, J., Contemporary Auditing and Assurance, Elegant Publishing
- Standards on Audit (SA) issued by the Institute of Chartered Accountants of India

(15M 15L)

DSE 5.1A TAXATION-II Full Marks – 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I Direct Tax

Internal Assessment: 10 marks Semester-end Examinations: <u>40 marks</u> <u>Total 50 marks</u>

Unit 1: Computation of Total Income and Tax Payable

- a) Rate of tax applicable to different assesses (except corporate assessee)
- b) Computation of tax liability of an individual, Firm (excluding application of AMT) (L-15 / M-15)

Unit 2 : TAX MANAGEMENT

a) Provision for Filing of Return

Date of filing of return, relevant forms of return, different types of returns, return by whom to be signed, PAN, TAN

b) Assessment of Return

Self assessment u/s140A, Summary assessment u/s 143(1), Scrutiny assessment u/s 143(3) and Best judgement assessment u/s 144.

c) Advance Tax

Who is liable to pay, due dates and computation of advance tax (excluding corporate assessees)

d) Interest & Fees

Section 234A, 234B, 234C, 234F (simple problems on interest and fees) **TDS**

Provisions regarding TDS from salary, interest on securities, horse racing, lottery. (L-25 / M-25)

Module II

INDIRECT TAXES Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit 3 : Central Sales Tax

e)

Definitions, incidence and levy of tax, exemptions and exclusions, forms under CST, determination of turnover and tax payable, registration of dealers. (L-10 / M-10)

Unit 4 : West Bengal Value Added Tax

Concepts and general principles, features, advantages and disadvantages, definitions, incidence and levy of tax, Rates of VAT, Calculation of VAT

liability, Input tax credit (including on Capital goods), small dealers and composition scheme, registration of dealers, cancellation of registration certificate.

(L-10 / M-10)

Unit 5 : Central Excise

Basic concepts, conditions and taxable event for levy of excise duty, Goods and excisable goods, Manufacture and deemed manufacture, Definitions of factory, broker or commission agent, wholesale dealer, sale or purchase, valuation – MRP, transaction value. (L-10 / M-10)

Unit 6 : Customs

Basic concepts, Taxable event, Territorial water, Indian customs water, Goods, Types of Customs duties – Basic, Additional, Protective, Safeguard, Counterveiling duty on subsidised goods, Anti Dumping, Valuation of Custom Duty. (L-10 / M-10)

The indirect tax portion of this paper will be replaced by the Goods & Service Tax Law whenever the law is enforced and accordingly revised syllabus will be announced. If any new legislations/provisions are enacted in place of the existing legislations/provisions, the syllabus will accordingly include such new legislations/provisions in place of existing legislations/provisions with effect from such date as prescribed by CALCUTTA UNIVERSITY. Similarly if any existing provision becomes redundant due to changes, it will be left out of the syllabus.

Suggested Readings

- Datey V.S., Indirect Taxes Law And Practice, Taxmann
- Sanjeev Kumar, Systematic Approach to Indirect Taxes, Bharat
- Bangar and Bangar, Students' Gide to Indirect Taxes, Aadhya Prakashan.
- Sengupta, C.H., Direct & Indirect Taxes, Dey Book Concern
- Roy, S. K., Principles and Practice of Direct & Indirect Taxes, ABS

Latest edition of the books may be read.

DSE 5.2 A

CORPORATE ACCOUNTING Full Marks – 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit	Торіс	Details	Marks	No. of
	,		allotted	lectures
1	Company – Introduction And Accounting for Shares & debentures	 Meaning of Company; Maintenance of Books of Accounts; Statutory Books; Annual Return Issue of Shares – issue, forfeiture, reissue, issue other than in cash consideration and issue to the promoters; Pro-rata issue of shares. Issue of debentures. Sweat equity. Right and Bonus Share – Rules, Accounting Underwriting of shares and debentures: Rules; Determination of Underwriters Liability – with marked, unmarked & firm underwriting; Accounting. Employee Stock Option Plan – meaning; rules; Vesting Period; Exercise Period. Accounting for ESOP. Meaning and Accounting of ESPS. 	20	20
2	Buy back and Redemption of preference shares	 Buy Back of Securities – meaning, rules and Accounting. Redemption of Preference Shares – Rules and Accounting (with and without Bonus Shares) 	10	10
3	Company Final Accounts	Introduction to Schedule III; Treatment of Tax; transfer to reserve, Dividend and applicable tax (out of current profit, out of past reserve); Preparation of Statement of Profit & Loss and Balance Sheet. (tax on net profit without recognizing deferred tax)	15	15
4	Redemption of debenture	Redemption of Debenture – Important Provisions, Accounting for Redemption: by conversion, by lot, by purchase in the open market (cum and ex-interest), held as Investment and Use of Sinking Fund	10	10
5	Valuation	Goodwill – valuation using different methods,i.e., Average Profit, Super Profit, Capitalisation and Annuity. Shares – Valuation using different methods: Asset	10	10
		Price, Cum-div and Ex-div, Majority and Minority view and		

		Fair Value		
6	Company Merger And Reconstruction	 Amalgamation, Absorption and Reconstruction– Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (based on relevant accounting standard); inter- company transactions (excluding inter-company share holding). Internal reconstruction – meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction 	15	15
		Total	80	80

Relevant Accounting Standards issued by the Institute of Chartered Accountants of India are to be followed.

Suggested Reading

- Sukla, Grewal, Gupta: Advanced Accountancy Vol. II, S Chand
- R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand
- Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing
- Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication
- Hanif & Mukherjee, Financial Accounting, Vol III, TMH
- • Frank Wood, Business Accounting Vol II, Pearson
- V.K.Goyal, Corprate Accounting, Excel Books
- Rajasekaran, Corporate Accounting, Pearson
- Accounting Standards issued by ICAI

DSE Papers SEMESTER V DSE 5.1 M : Consumer Behaviour & Sales Management (50+50) Full Marks – 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Consumer Behaviour

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Consumer Behaviour

No. of Classes 8 / Marks 8

- Concept : Application of Consumer Behaviour Knowledge
- Consumer Behaviour Model

Market Segmentation

• Marketing Ethics

Unit 2 : Determinants of Consumer Behaviour

No. of Classes 8 / Marks 8

- Consumer as an Individual, Need, Motivation
- Personality, Perception, Learning Attitude
- Communication persuasion
- Consumers in their Social & Cultural Setting, the family, Social class, cross cultural consumer behaviour

Unit 3 : Consumer Decision-making Process

No. of Classes 8 / Marks 8

- Personal Influence & Opinion
- Leadership Process
- Diffusion of innovations
- Consumer decision making process

Unit 4 : Consumer Behaviour & Society No. of Classes 8 / Marks 8

- Health care Marketing
- Political marketing
- Social Marketing
- Environmental Marketing
- Public Policy & Consumer Protection

Unit 5 : Consumer Behaviour and Market Research No. of Classes 8 / Marks 8

- Relevance of Marketing Information System
- Market Research in assessing Consumer Behaviour

Suggested Readings:

- Suhiffman & Kanuk, Consumer Behaviour, PHI
- Loudon & Bitta, Consumer Behaviour, TMH
- Bennet & Kassarjian, Consumer Behaviour, PHI
- Batra & Kazmi, Consumer Behaviour, Text & cases, Excel Books
- Beri, Marketing Research, TMH
- Bradley, marketing Research. Oxford University Press
- Schiffman and Kannak, Consumer Behaviour, Pearson Education

Module II : Sales Management

Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit 1 : Sales Organization

No. of Classes 8 / Marks 8

- Purpose and General principles of organization
 Every-growing complexity of Sales Organisation
 Different Models of Sales Organisation
 Factors determining Sales Organisation Structure
- Decentralised Structure
- Common problems associated with Structuring the Sales Organisation
- Modification of Sales Organisation
- Tasks of Chief Sales Executive

Unit 2 : Designing the Sales Force

No. of Classes 8 / Marks 8

٠	Objectives
•	Strategies
•	Structure size
•	Sales force Compensation

Unit 3 : Managing the Sales Force

No. of Classes 8 / Marks 8

•	Recruitment
•	Selection
•	Placement
•	Transfer
•	Training and Development
•	Grievances handling of Sales Force
•	Motivating Leading and Communicating with the Sales Force
•	Performance Evaluation of Sale Force

Unit 4 : Personal Selling and Salesmanship

No. of Classes 8 / Marks 8

- Buyer-Seller Dyads
- Theories of selling
- Personal Selling as a Career
- Steps in Personal Selling Methods of Approaching a Customer
- Handing Customer Objections
- Negotiations Barganing and Negotiation Approaches, Bargaining Strategies and Tactics during Negotation

Unit 5 : Marketing Channels and Selection

No. of Classes 8 / Marks 8

- Need
- Functions
- Levels
- Identifying and Analyzing Customers' needs for Products Services
- Developing channel Objective, Selection of Appropriate Channel
- Selection of Appropriate channels
- Motivating, Leading, Communicating with the Channel Members
- Performance Evaluation of the Channel Members
- Modifying Channel Arrangements

Suggested Readings:

- Cundiff, Still and Govoni, Sales management, PHI
- Smith, Sales Management, PHI
- Kotler, Marketing Management, PHI
- Zieglar, et al Sales Promotion and Modern Merchandising
- Stem, Ansary and Coughlan Marketing Channels, PHI
- Warmer, Marketing and Distribution, Macmillan, New York
- Pyle, Marketing Principles, Macmillan, New York
- Doughlas, et al Fundamentals of Logistics and Distributions, TMH
- Gupta, Sales and Distribution Management, Excel Books
- Havaldar & Cavale, Sales and Distribution Management, McGraw Hill
- Hawkins, Motherbaugh & Mookerjee, Consumer Behaviour, McGraw Hill
- Schiffman, Wisenblit & Kumar, Consumer Behaviour, Pearson

DSE 5.2 M : Product & Pricing Management (50) & Marketing Communication (50) Full Marks – 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Product & Pricing Management

Internal Assessment: 10 marks Semester-end Examinations: <u>40 marks</u> Total 50 marks

Unit 1 : Introduction to Product Management

No. of Classes 8 / Marks 8

- Product: Basic concept of product, levels, Importance in Marketing Mix, Product Mix Decisions
- Product-Life-Cycle: Concept, strategies related to different stages of PLC.
- Product Portfolio: Concept, Importance, BCG Model

Unit 2 : Marketing Environment and Market segmentation

No. of Classes 8 / Marks 8

- Marketing Environment: concept, Importance, Micro-environmental factors and Macro-environmental factors (Demographic, Economic, Natural, Technological, Socio-Cultural & Political-Legal)
- Market segmentation: Concept, Importance and bases

Unit 3 : New Product Development

No. of Classes 8 / Marks 8

Concept
Importance
Stages
Reasons for failure of a new product
Adoption process.

Unit 4 : Packaging and Branding:

No. of Classes 8 / Marks 8

Packag	ing:
•	Concept
•	Importance
•	Packaging Strategies
•	Legal and Ethical aspects of packaging
Brandi	ng:
•	Concept
•	Importance
•	Positioning and repositioning strategies
•	Basic concepts of Brand equity

Unit 4 : Pricing Management:

No. of Classes 8 / Marks 8

is an element of Marketing Mix
mer buying process
e pricing

•	Pricing	methods
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• Pricing in the Indian context

• Regulatory Price Environment

Suggested Reading:

- Kotler and Kellar, Marketing Management, Pearson
- William and Ferrell, Marketing, Houghton Miffin McGraw-Hill
- Neelamegham, Marketing in India: Cases and Readings, Vikas Publishing
- Majumder, Product Management in India, PHI
- McCarthy and Perreault, Basic Marketing Managerial Approach, Irwin, Homewood, Illinois
- Srivastava, R. K., product Management & New product Development, Excel Book
- Ramaswamy and namakumari, Marketing Management, Macmillan India
- Srinivasan Case Studies in marketing: The India Context, PHI
- Baker & Hart, Product Strategy and Management, Pearson

Module II: Marketing Communication

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Communication Process

No. of Classes 8 / Marks 8

- Importance of communication
- Steps involved in the process of Communication
- Barriers to Marketing Communication
- Social Media, Digital Marketing- Concepts

Unit 2 : Communication Mix

No. of Classes 8 / Marks 8

•	Advertising : Definition & Importance
•	Different Adverting Function
•	Types of Advertising
•	Advertising Process
•	Setting Advertising Objective
٠	Budget
•	Economic aspects of Advertising

Unit 3 : Advertising Process

No. of Classes 8 / Marks 8

•	Advertising Appeal
•	Copy Writing
•	Headline

•	Illustration
•	Message
•	Сору Туре
•	Campaign Planning
•	Different Types of Media
•	Media Planning
•	Scheduling

Unit 4 : Impact of Advertising No. of Classes 8 / Marks 8

1222	Ses 0 / Ivial KS 0
•	Advertising Agency Roles
•	Relationships with Clients
٠	Role of Advertising Department
٠	Measuring Advertising Effectiveness
•	Legal and Ethical Aspects of Advertising
	•

Unit 5 : Sales Promotion

No. of Classes 8 / Marks 8

•	Meaning
•	Nature and Function
•	Types
•	Sales Promotion Techniques (Sample Distribution, Coupon, Price off
	premium plan, Consumer contests, Displays Demonstration, Trade Fairs and
	Exhibitions
•	Role of Sales force

• Limitation of Sales Promotion

Suggested Readings:

- Batra and Myers, Advertising Management, Prentice Hall
- Sengupta, Brand Positioning Strategies for Competitive Advantage, TMH
- Cundiff, Still and Govoni, Sales Management, Prentice Hall
- Rossiter and Percy, Advertising and Promotion Management, MacGraw-Hill Sundage,
- Fryburger and Rotzoll, Advertising Theory and Practice, AITBS
- Belch and Belch, Advertising and Promotion, McGraw Hill

DSE 5.1T PUBLIC FINANCE AND TAXATION

Full Marks – 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: Origin and Development of Public Finance	L 8/8 Marks)
• Meaning, The rationale for State intervention – mar	ket failure, externalities, public goods
• Public finance and private finance, principle of max	imum social advantage
Unit 2: Taxation and Government Revenue	L 8/12 Marks)
• Benefit approach, Ability to pay approach	
• Impact and incidence of taxation, Direct and indired	ct taxes, Excess burden of taxes
• Sources and classification of public revenues	
Unit 3: Government Expenditure	(L 8/4Marks)
• Provision of public goods and merit goods, redistrib	ution objective of public expenditure
Unit 4: Impact of Taxation and Public Expenditure	(L 8/8Marks)
• Effect on production, investment, distribution and su	ability
Unit 5: Public Debt - Meaning, Impact and Management	(L 8/8Marks)
Unit 6: Development of Federal Finance in India	(L 8/8 Marks)
• The constitutional arrangements, Finance Commiss	ions
Unit 7: Central Finances in India	(L 8/8 Marks)
• Sources and uses of funds, effects of Fiscal Policy	
• Different concepts of Deficit- Impact of deficit	
Unit 8: State Finances	(L 8/8 Marks)
• Sources and uses of funds, issues of federalism	
Unit 9: Fiscal Reforms in India	(L 8/8 Marks)
• Changing scenario of Indian tax Structure, FRBM	Act
Unit 10: Issue of Public Debt in India –Internal and Exte	ernal (L 8/8 marks)

Suggested Readings:

- Musgrave, R., The Theory of Public Finance, McGraw Hill
- Musgrave & Musgrave, Public Finance in Theory and Practice, McGraw Hill
- Bhargava B.M., The Theory and Working of Union Public of India
- Vaish & Agarwal, Public Finance, Willy Eastern
- Rosen, S.H. & Gayer, T., Public Finance, McGraw Hill

DSE 5.2 T Paper DSE 5.2T

DIRECT TAX LAW AND PRACTICE Full Marks – 100

Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1: a) Residential Status and Incidence of Tax

Residential status of a company & tax incidence. Income deemed to accrue or arise in India u/s 9.

b) Incomes which do not form part of Total Income Sec 10(11A), 10(12A), 10(30), 10(31), 10(34) read with sec. 115BBDA, 10(35), 10(43) and 10AA. (L-10/M-10)

Unit 2: Heads of Income and Provisions Governing Heads of Income

- a) Profits and gains of business or profession
- Advance level discussion with special emphasis on presumptive taxationb) *Capital Gains*
 - Advance level discussion with special emphasis on transfer, treatment u/s 45(1A), 45(2), 45(3), 45(4), 45(5), Transfer of assets between holding and subsidiary company, and exemptions.
- c) Income from other sources Advance level discussion with special emphasis on gift and deemed dividend. (L-25 / M-25)
- *Unit 3*: a) Income of other Persons included in Assessee's Total Income Revocable transfer of assets, Income from assets transferred to the benefit of spouse and son's wife, conversion of self acquired property into joint family property.
 - b) Deductions from Gross Total Income Deductions u/s 80IAB, 80IAC, 80IBA, 80IE, 80JJ, 80JJAA (L-10 / M-10)
- **Unit 4 :** a) Relief U/S 89
 - b) *Double Taxation Relief*
 - c) Business Restructuring Amalgamation, Demerger, Stump Sale with special reference to treatment of depreciation and capital gains. (L-10 / M-10)
- Unit 5 : Computation of Total Income and Tax Payable
 Advance level problems on computation of total income and tax liability of an individual, HUF, Firm, LLP and AOP (including application of AMT) (L-25 / M-25)

Suggested Readings

- Singhnia V.K., and Singhania K, Direct Tax Law and Practice, Taxmann
- Lal and Vashist, Direct Taxes, Pearson
- Ahuja and Gupta, Direct Taxes Law And Practice, Bharat
- Manoharan and Hari, Direct Tax Laws, Snowwhite

Latest edition of the books may be read.

DSE 5.1eB

FUNDAMENTALS OF COMPUTERInternal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit 1. Computer Basics: Characteristics of computer. Generations of computer. Type of computer – Mainframe, Mini, Micro (desktop, laptop and handheld), Super Computer. Inside a Computer – Power supply (SMPS), Motherboard, Ports and interfaces, Expansion Cards, memory Chips, Ribbon Cables, Storage devices, Processor. [12 lectures / 12 Marks]

Unit 2. CPU organistion and architecture: Arithmetic/Logic Unit (ALU), control Unit (CU), Registers, System Bus, Processor to Memory Communication Processor to I/O devices Communication. [12 lectures / 12 Marks]

Unit 3. Memory organization: Memory representation, Cache memory, Primary memory – RAM and ROM. Functions of RAM and ROM. Different types of RAM and ROM.

Secondary memory – Magnetic and optical storage devices (brief description of different types). Storage organization of a Magnetic disk. Mass storage devices – RAID, Automated Tape Library. [10 lectures / 10 Marks]

Unit 4. Input and Output devices: Major types and their functions. [6 lectures / 6 Marks] **Unit 5. Operating System**: Concept, types, functions. [6 lectures / 6 Marks]

Unit 6. Problem Solving Tools: Algorithm. Flowcharts- Concepts, advantages and disadvantages of flowcharts, Problem solving using flowcharts.

Decision Tables - Concepts, advantages and disadvantages of decision tables, Problem solving using decision tables. [12 lectures / 12 Marks]

Unit 7. Data communication and Computer networks: Transmission Modes - Simplex, Half-Duplex, Full Duplex. Analog and digital transmission. Synchronous and Asynchronous transmission. Multiplexing. Network Concept, Types - LAN, WAN, MAN, VAN, SAN.

Various Topologies - Bus, Star, Ring, Mesh, Tree. Protocol Models - OSI, TCP/IP [16 lectures/ 16 Marks]

Unit 8. Multimedia essentials: Definition, building blocks of multimedia, multimedia system, multimedia application. [6 lectures / 6 Marks]

Suggested Readings:

• ITLESL, Introduction to Computer Science, Pearson Education

• ITLESL, Introduction to Information Technology, Pearson Education

• .Sinha & Sinha, Fundamentals of Computers, BPB Publication.

• .Rajaraman, Fundamentals of Computers, PHI

DSE 5.2 eB DATABASE MANAGEMENT SYSTEM & SYSTEM ANALYSIS AND DESIGN Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations Module I: DATABASE MANAGEMENT SYSTEM Internal Assessment: 10 marks Semester-end Examinations: 40 marks Total 50 marks

Unit 1. Introduction to DBMS: Concepts of database and database management system(DBMS). Data abstraction. Architecture – three schema architecture. Administration roles. (L8 /M8) Unit 2. Data models: hierarchical model, network model and relational model. (L6 /M6) Unit 3. Database languages: Data Definition Language (DDL), Data Manipulation Language (DML), and Data Control Language(DCL). (L6 /M6) Unit 4. SQL – An Overview: SQL constructs, embedded SQL , Query & Query Optimization Techniques. (L6 /M6) Unit 5. Database design: Design phases - conceptual, logical and physical . ER diagram and model. (L6 /M6) Unit 6. Database Normalisation: Concept. Normal forms - 1NF, 2NF, 3NF, BCNF. (L4 /M4) Unit 7. Indexing; Single level indexing - Primary, Clustering, Secondary. Multilevel indexing. (L4 /M4)

Suggested Readings:

• Korth, Data Base System Concepts, TMH

• Leon, Data Base Management System, VIKAS

• Ivan Bayross, PL/SQL Programming

Module II:SYSTEM ANALYSIS AND DESIGNInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1. Overview of System analysis and design: system concepts. System Development models – Waterfall model, Spiral model. System development methods – major steps. (L8 /M8) **Unit 2. Phases in System Development**: Problem definition. Analysis. Design. Implementation.

Evaluation. (L6 /M6) **Unit 3. Information requirement analysis**: Process modelling with physical and logical data flow diagrams. (L10 /M10)

Unit 4. System design: Process descriptions, Input/output controls, object modeling, Database design, User Interface design, Documentation, Data Dictionary, Development methodologies: Top down, bottom up, structured chart, decision table, decision tree. (L10 /M10)

Unit 5. Testing – Unit, integration, system, Acceptance, regression, Test Case generation. (L6 /M6)

Suggested Reading:

• Parthasarathi, System Analysis & Design, EPH

• Raja Raman, Analysis & Design of Information Systems, PHI

Year 3: Semester VI

		Marks	Credit Hours	
AECC 6.1Chg	Environmental Studies	100	2	
SEC 6.1Chg	Computerised Accounting and e-Filing of Tax Returns (70+30)	100	4	
DSE 6.1 A**	Financial Reporting and Financial Statement Analysis	100	6	
DSE 6.2 A**	Financial Management	100	6	
			24	

SEC 6.1Chg

COMPUTERISED ACCOUNTING SYSTEM and E-FILING OF TAX RETURN

(Practical)

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit-1: Computerized Accounting Package: Using Generic Software [40 Marks, Class: 40]

- (a) Company creation, ledger creation, order processing, accounting voucher, inventory voucher, memorandum voucher, invoicing, multiple godown handling, Transfer of materials across godowns, Bank Reconciliation,
- (b) Cost Centre, Cost Category, Bill of Material (BoM), Budget and Controls
- (c) Payroll Accounting
- (d) TDS, GST
- (e) Back up & Restore, Export and Import data

Unit 2: Designing Computerized Accounting System [15 Marks, Class:15]

- (a) Introduction to DBMS Package Table, Query, Form and Report
- (b) Designing Computerized Accounting System using DBMS Package Creating a voucher entry Form, Preparing ledgers, trial balance, profit & loss a/c, and balance sheet with Form wizard and Report
- (c) Designing Payroll System for Accounting using Form, Query, and Report

Unit-3: E-filing of Tax return [25 Marks, Class: 25]

- (a) Preparation and submission of the Income Tax Return (ITR) offline/online for individual taxpayer [e-filing without using DSC and with using DSC, EVC]
- (b) View form 26AS, Upload return, View e-file returns, e-verification
- (c) Use of e-tax calculator (including interest calculation u/s 234A, 234B, 234C)
- (d) E-Pay tax (Challan No./ITNS 280, ITNS 281)
- (e) Prepare and submit online form 10E [Relief u/s 89(1)]

Project Work: Assignment based for each and every topic should be prepared

- Software: Singhania, V.K., E-Filing of Income Tax Returns and Computations of Tax, Taxmann
- Software: "Excel Utility", incometaxindiaefiling.gov.in

DSE 6.1 A

FINANCIAL REPORTING AND FINANCIAL STATEMENT ANALYSIS

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations FINANCIAL REPORTING AND FINANCIAL STATEMENT ANALYSIS

Unit	Topic	Details	Marks allotted	No. of lectures
1	Holding Company	Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest – Basic principles and preparation of CBS; CBS with loss balance	15	15

		of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intra- group Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding)		
2	Accounting Standards	Conceptual Framework, Presentation of Financial Statements (Ind AS 1), Property, Plant and Equipment (Ind AS 16), Earnings per share (Ind AS 33), [Basic Definitions & Theoretical Concepts, Scope]	15	15
3	Fund Flow Statement	Concept of fund, meaning, nature, various sources And applications, advantages & limitations of Fund Flow Statement.	20	5
4	Cash Flow Statement	Meaning, objectives, difference with Fund Flow Statement; activity classification and preparation and presentation as per relevant Accounting Standard.		15
5	Introduction to Financial Statements Analysis	 Nature and Component of Financial Statement; Meaning and Need for FSA, Traditional & Modern approaches to FSA, Parties interested in FSA. Comparative Statement – meaning, preparation, uses, merits and demerits Common -size Statement – meaning, preparation, uses, merits and demerits Trend Analysis – meaning, determination, uses, merits and demerits 	10	12
6	Accounting Ratios for FSA	Meaning, objective, Classification of Accounting Ratios, Advantages & Limitations Preparation of Classified Financial Statements and Statement of Proprietor's Fund from the given Ratios. Computation, Analysis and Interpretation of important ratios for measuring –Liquidity, Solvency, Capital Structure, Profitability and Managerial Effectiveness.	20	18
			80	80

Suggested Readings:

- L.S.Porwal, Accounting Theory, Tata Mcgraw Hill
- Gokul Sinha, Accounting Theory & Management Accounting,
- B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
- Lev, Financial Statement Analysis-a new approach, Prentice Hall

- Foster G, Financial Statement Analysis, Prentice Hall
- White, Sondhi& Fred, Analysis and Use of Financial Statement, John Wiley
- Bernstein & Wild, Financial Statement Analysis; theory, application & interpretation, Mcgraw Hill
- Ormiston, Understanding Financial Statement, Pearson
- Bhattacharyya, Asish K., Introduction to Financial Statement Analysis, Elsevier
- Hanif & Mukherjee, Financial Accounting, Vol III, McGraw Hill
- Subramanyam, K.R. and Wild, Financial Statement Analysis, McGraw Hill

DSE 6.2 A

FINANCIAL MANAGEMENT

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Unit	Topic	Content	Marks	Hours
1	Introduction	 Important functions of Financial Management Objectives of the firm: Profit maximisation vs. Value maximisation Role of Chief Financial Officer. Financial environment in which a firm has to operate Time Value of Money: concept and reasons 	. 10	10
	Basic Concepts	 Compounding and Discounting techniques Concepts of Annuity and Perpetuity. Risk-return relationship (concepts only) 		
2	Sources of Finance and Cost of Capital	 Different sources of finance; long term and short term sources Cost of capital: concept, relevance of cost of capital, Implicit and Explicit cost, specific costs (its computation) and weighted average cost (its computation), rationale of after tax weighted average cost of capital, marginal cost of capital (its computation). 	10	10
3	Leverage and Capital Structure Theories	 EBIT-EPS analysis and its limitations. Financial break even, point of indifference Leverage- Business Risk and Financial Risk - Operating and financial leverage, Trading on Equity Capital Structure decisions - Capital structure patterns, designing optimum capital structure, Constraints, Features of sound capital structure, Various capital structure theories (excluding M-M model). 	10	10
4	Working Capital Management (1)	 Introduction; Meaning and various concepts of Working Capital Management of Working Capital and Issues in Working Capital Estimating Working Capital Needs; Operating or Working Capital Cycle. 	10	10
5	Working	 Policies relating Current Assets – Conservative, Aggressive 	10	10

	Capital	and Balanced		
	Management	• Various sources of finance to meet working capital		
	(2)	requirements; Financing current assets: Strategies of financing		
		(Matching, Conservative, and Aggressive policies)		
		• Management of components of working capital (debtors		
		management only-credit period -simple type)		
6	Capital Expenditure Decisions (1)	 Purpose, Distinguishing features, Objectives & Process, Understanding different types of projects Concept of Cash flow; Cash flow vis-à-vis Profit and determination of Cash flow Techniques of Decision making: Non-discounted and Discounted Cash flow Approaches Payback Period method, Accounting Rate of Return and their relative merits and demerits 	10	10
7	Capital Expenditure Decisions (2)	 Discounted Payback Period, Net Present Value, Profitability Index and Benefit Cost ratio, Internal Rate of Return, relative merits and demerits of the methods.(excluding replacement decision) Ranking of competing projects, Ranking of projects with unequal lives. Capital Rationing. 	10	10
8	Dividend Decisions	 Meaning, Nature and Types of Dividend, Dividend and Retention; concept of pay-out ratio, retention ratio and growth. Dividend policies and formulating a dividend policy Dividend Theories: Walter's Model, Gordon's Model, 	10	10
		Total	80	80

Suggested Readings

- M.Y.Khan & P.K.Jain, Financial Management, TMH
- Van Horne, Financial Management & Policy, Pearson
- Van Horne, Fundamentals of Financial Management, PHI
- Banerjee, B., Financial Policy & Management Accounting, PHI
- Chandra, P., Financial Management, TMH
- Rustagi, R.P. Fundamentals of Financial Management. Taxmann Publication Pvt. Ltd.
- Pandey, I.M. Financial Management. Vikas Publications.
- Majumdar, Ali and Nesha, Financial Management, ABS
- Kothari, R, Financial Management, Sage

DSE 6.1 M Retail Management and Marketing of Services (50+50) Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Retail Management

Internal Assessment: 10 marks **Semester-end Examinations: 40 marks** 50 marks Total

Unit 1 : Introduction to Retailing

No. of Classes 8 / Marks 8

•	Relevant Concept
•	Importance
•	Function

Unit 2 : Retailing in India

No. of Classes 8 / Marks 8

•	Factors determining Growth of Retailing in India	
•	Impact of Retail in Nation's Economy	
•	Key Drivers of the Indian Retails Industry	

Key Drivers of the Indian Retails Industry

Unit 3 : Retail Formats

No. of Classes 8 / Marks 8

•	Concept
•	Types of Retailing – Multi Channel Retailing, Single Channel Retailing
•	Product factors of Retail format
•	Location factors of Retail format
•	Current Indian Scenario

Unit 4 : Pricing in Retail No. of Classes 8 / Marks 8

•	Price factors of Retail format
•	Importance of Retail Pricing
•	Factors affecting Retail Pricing
•	Approaches to Product Pricing

Unit 5 : Promotion in Retail

No. of Classes 8 / Marks 8

- Need and Objective of Promotional Mix in Retailing
- Promotional Mix and Strategy development •
- Customer Relationship Management

Suggested Reading

- Madaan, Fundamentals of Retailing, Tata McGraw-Hill
- Pradhan, S., Retailing Management, McGraw Hill
- Seshanna & Prasad, Retail Management, McGraw Hill
- Berman, Evans & Mathur, Retail Management, Pearson

Module II: Marketing of Services

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Introduction to Services Marketing & Services and economy of a country No. of Classes 8 / Marks 8

•	Concept of services
•	Types
•	Function
•	Nature
•	Characteristics
•	Understanding Services Customers
•	Impact of service marketing in the economy of a country

Unit 2 : Issues in Marketing of Services

No. of Classes 8 / Marks 8

Services		
rvices		
of Service		
ervices		
vidence		
anagement		
	ervices of Service Services Evidence anagement	ervices of Service Services Evidence anagement

Unit 3 : Service Marketing Management

No. of Classes 8 / Marks 8

- Managing Services Quality
- Relationship marketing Concept
- Service Communication Mix
- Communication Strategy

Unit 4 : Consumer Behaviour and Service No. of Classes 8 / Marks 8

|--|

- Guidelines for Developing Service Communications
- Consumer Decision making process & ethical issues (concepts, factors influence
- decision making process, ethical decision making methods)

Unit 5 : Service Marketing in Non-profit and profit Organisations

No. of Classes 8 / Marks 8

Travel and Tourism
Financial Services
Information Technology Services

Media Services
Health Care Services
Educational Services

Suggested Reading

- Verma, H. V., Services Marketing, Pearson
- Venugopal and Raghu, Services Marketing, Himalaya Publishing Ltd.
- Ravi Shankar, Services Marketing : The Indian Perspective, Excel Books
- Rampal & Gupta, Services Marketing, Concepts, Applications & Cases, Galgotia
- Apte, Services Marketing, Oxford University Press

DSE 6.2 M Rural Marketing and International Marketing (50+50) Full Marks 100

Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module I: Rural Marketing

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Rural Marketing and Environment No. of Classes 8 / Marks 8

•	Concept	
•	Importance	
•	Rural vs. Urban Marketing	
•	Geographic	
•	Economic	
•	Socio-Cultural	
•	Infrastructural factors	
٠	Their influence on Rural Marketing Operation	

Unit 2 : Rural Consumer

No. of Classes 8 / Marks 8

•	Characteristics
•	Attitudes
•	Behaviour
•	Buying Patterns and Influences

Unit 3 : Rural Marketing Strategies

No. of Classes 8 / Marks 8

Segmenting Rural markets
Product Planning for Rural markets
Market Size
Packaging and Branding Decisions
Pricing Decisions

Unit 4 : Promotion and Distribution in Rural Markets

No. of Classes 8 / Marks 8

- Promotion in Rural Markets
- Distribution Channels and Logistics in Rural Markets

Unit 5 : Marketing of Agricultural Products

No. of Classes 8 / Marks 8

- Pricing
 - Distribution of Agricultural Products
 - Role of Government
 - Other organization in Marketing Agricultural products
 - Co-operative Marketing
 - Problems in Agricultural Marketing

Suggested Readings:

- Rajagopal, Management of Rural Business, Wheeler
- Neelamegham, Marketing in India : Cases and Redings, Vikas Publishing
- Mathur, U. C., Rural Marketing, Wheeler
- Nyyar and Ramaswamy, Globallization and Agricutural Marketings, Rawat Publishers
- Mamoria, Agricultural marketing, Himalaya Publisheing House
- Kashyap, P., Rural Marketing, Pearson

Module II: International Marketing

Internal Assessm	ent: 10 marks
Semester-end Ex	aminations: 4 <u>0 marks</u>
Total	50 marks

Unit 1 : Introduction No. of Classes 8 / Marks 8

٠	Definition
٠	Nature and Scope of International Marketing
٠	International Marketing Environment (Basic Concepts) PESTL-SOWC
٠	Market Entry (When-Why-How)
٠	Entry Strategy (Concept - Features - Advantages and Disadvantages)

Unit 2 : Product/ Service Planning for International Market

No. of Classes 8 / Marks 8

Categorization (Standardisation / Adaptation) of Product/ Service Planning

- Packaging and Labelling
- Quality
- After Sales services

Unit 3 : International Pricing

No. of Classes 8 / Marks 8

- Factors influencing International Price
- Pricing Strategy
- Export Price
- Price Quotation and Payment Terms

Unit 4 : Promotion and Distribution of Product/Service Abroad

No. of Classes 8 / Marks 8

Promotional Tools:			
	Sales literature		
	Direct Mail		
	Personal Selling		
	• Advertising		
	Trade Fairs and Exhibitions		
 Distribution Channels (Categorization – Features - advantages and disadvantages) 			
•	 Logistics (Meaning – Categorization - advantages and disadvantages) 		
•	Selection and management of Foreign Sales Agents		

Unit 5 : Import and Export Policies and Practices in India No. of Classes 8 / Marks 8

- EXIM Policy An Overview
- Trends in India's Foreign Trade
- Steps in Starting an Export Business
- Documentation and Procedure
- Legal Aspects
- Export Finance
- Export Risk Insurance
- Export Assistance and Incentives
- Export Oriented Unit
- Export Processing Zone

Suggested Readings

- Bhattacharyya and Varsney, International Marketing Management, Sultan Chand
- Bhattacharyya, Export Marketing Strategies for Success, Global Press
- Keegan, Multinational Marketing Management, Prentice Hall
- Kriplani, International Marketing, Prentice Hall
- Taggart and Mott, The Essence of International Business, Prentice Hall

- Kotler, Principles of Marketing, Prentice Hall
- Caterora and Keavenay, Marketing : an International Perspective, Irwin, Homewood, Illinois
- Paliwala, The Essence of International Marketing, Prentice Hall
- Vasudeva, International Marketing, Excel Books
- Pateora, Graham and Salwan, International Marketing, McGraw Hill

DSE 6.1 T Indirect Tax: Laws and Practices Full Marks 100 **Internal Assessment:** 20 marks Semester-end Examinations: 80 marks Total 100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Full Marks - 100

Unit 1 :

Basic Concepts Concepts of Indirect Tax, Difference between Direct and Indirect Tax, Indirect

tax structure in India, Proposed changes in indirect tax structure in India. (L-25 / M-25)

(L 15 / M 15)

(L 20 / M 20)

(L 10 / M 10)

(L 10 / M 10)

Central Excise b)

WB VAT **Unit 2 :**

Unit 3 : Customs

Unit 4 : **Central Sales Tax**

Unit 5 : Service Tax

a)

Suggested Readings

- Datey V.S., Indirect Taxes Law And Practice, Taxmann •
- Sanjeev Kumar, Systematic Approach to Indirect Taxes, Bharat
- Bangar and Bangar, Students' Gide to Indirect Taxes, Aadhya Prakashan.

This Paper will be replaced by Goods & Service Tax Law whenever the law is enforced and accordingly revised syllabus will be announced.

Latest edition of the books may be read.

Paper DSE 6.2T TAX PROCEDURE AND PLANNING Full Marks 100 **Internal Assessment:** 20 marks **Semester-end Examinations: 80 marks** 100 marks Total

Marks shown against the units indicate marks for Semester-end Examinations

Module I: TAX PROCEDURE **Internal Assessment:** 10 marks **Semester-end Examinations: 40 marks** 50 marks Total

Unit 1 :	Retu a l	 a) Forms for all types of assesses b) Assessments and Reassessments (basic 	concepts)
		,	(L ¹⁵ /M15)
Unit 2 :	a) b)	Advance Tax (all types of assessees) Interest & Fees	
	c)	Advance Ruling for Non-resident	(L 10 / M 10)
Unit 3 :	a)	TDS	
	b)	Refund of Excess Payment	(L 5 / M 5)
Unit 4 :	a)	Penalties and Prosecutions	
	b)	Appeals and Revisions	
	c)	Income Tax Authorities	(L 10 / M 10)

Module II: TAX PLANNINGInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1 : Basic Concepts

- a) Concept and difference between tax planning, tax avoidance, tax evasion and tax management.
- b) Objectives, requisites, factors and types of tax planning
- c) Tax on distributed Profit and on units of mutual fund.

(L 5 / M 5)

Unit 2 : Tax Planning-I

- a) Tax Planning under different Heads of Income
- b) Tax Planning on Deductions under Chapter VIA (L 10/M 10)

Unit 3 : Tax Planning-II

- a) Setting up a New Business : Location, nature and form of business.
- b) Financial Management Decisions : Capital structure, dividend policy, deemed dividend and bonus shares.
- c) Tax Planning related to sale of scientific research assets.
- d) Tax Planning related to Amalgamation, Demerger and conversion of company into LLP.
- e) Transfer of assets between Holding & Subsidiary company
- f) Tax planning with reference to receipt of insurance premium.
- g) Own fund versus borrowed fund for financing of assets.h) Sale in domestic market or export

(L15 / M 15)

- Unit 4: a) Tax planning in relation to Employees Compensation
 - b) Basic Concepts of transfer pricing, APA.
 - c) Relief for Double Taxation (covering more than one foreign country) $(L10\,/\,M\,10)$

Suggested Readings

- Singhania V.K., and Singhania K, Direct Tax Law and Practice, Taxmann
- Lal and Vashist, Direct Taxes, Pearson
- Ahuja & Gupta, Corporate Tax Planning Management, Bharat Law House.
- Singhania V.K., and Singhania M, Corporate Tax Planning and Business Tax Procedure, Taxmann.

Latest edition of the books may be read.

DSE 6.1 e-B Internet & WWW and Functional e-Business System (50+50) Full Marks 100 Internal Assessment: 20 marks Semester-end Examinations: <u>80 marks</u> <u>Total 100 marks</u>

Marks shown against the units indicate marks for Semester-end Examinations

Module I: INTERNET AND WORLD WIDE WEB

Internal Assessme	ent: 10 marks
Semester-end Exa	minations: 4 <u>0 marks</u>
Total	50 marks

Unit 1. Working of the internet with TCP/IP: Origin of TCP/IP. TCP/IP communication architecture, Internet Architecture, Working of TCP/IP,TCP/IP Applications - FTP, Telnet, Simple Mail Transfer Protocol, Network File System. (L10 /M10)

Unit 2. Internet Concepts: WWW, Internet and E-Commerce, Linking to the Internet, Internet Address, Internet Tools- Information Retrieval tools (ftp, Gopher), Communication Tools(Email, FTP, Telnet, Usenet), Multimedia Information Tools(Home page), Information Search Tools(Archie, Veronica, WAIS). Domain Name System. (L12 /M12)

Unit 3. Intranet and Extranet: Intranet, Intranet vs. Groupware, Intranet Hardware, Intranet Software, Intranet Services (Web (HTTP) Publishing, HTML,), Communication Systems (Email, Fax), Software used in Electronic mail, Electronic Meeting Systems(Audio conferencing, Video Conferencing, Groupware), Extranet. (L6 /M6)

Unit 4. Internet Security: Security on the internet, Network and Website Security Risks, Site Hacking, Security Incidents on the internet security and email, network and website security, Firewall(Concept, Components and Constituents, Benefits), Enterprise wide security Framework, secure physical infrastructure). (L 12/M12)

Module II: FUNCTIONAL E-BUSINESS SYSTEMInternal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1. Applications of E-Business: Direct Marketing and Selling, Value Chain Integration, Supply Chain Management, Corporate Purchasing, Financial and Information Services, Obstacles in adopting E-Business Applications. (L6 /M6)

Unit 2. E-Strategy: Information and Strategy, The virtual value chain planning E-Business project, E-Business strategy and knowledge management. (L 4 / M 4)

Unit 3. Customer –effective Web design: Requirements of Intelligent Websites, Website Goals and Objectives, planning the budget, analyzing website structure, fixed versus flexible webpage design, choosing a page size, website development tools, design alternatives, outsourcing web design, testing

and maintaining websites. (L6 /M6)

Unit 4. Electronic Payment Systems-Overview of Electronic Payment Systems, Customer to Merchant Payments, Peer to Peer Payments. Electronic Banking, Electronic Fund Transfers. (L6 /M6)

Unit 5. E-Business Marketing Concepts: Basic marketing concepts for internet marketing, EBusiness marketing and branding strategies, Strengthening the customer relationship. (L4 /M4)

Unit 6. E-Commerce and Online service industries: Online financial services. Online travel services. Online career services. (L4 /M4)

Unit 7. Mobile Commerce- Wireless Spectrum, WAP - Origins of WAP, WAP Architecture. Wireless Datagram Protocol(WDP), Short Message Services, General Packet Radio Service(GPRS), Wireless Technology (CDMA, GSM), Different generations in Wireless Communication, Mobile commerce and its future in India. (L10 /M10)

Suggested Readings:

• S. Jaiswal, Doing Business on the Internet E-COMMERCE (Electronic Commerce for Business), Galgotia Publications.

• P.T.Joseph, E-Commerce An Indian Perspective, S.J., PHI.

• Kenneth C. Laudon, Carol Guerico Traver, 3.E-Commerce Business.Technology, Society, Pearson Education.

• Schneider, E-Commerce, Thomson Publication

DSE 6.2 e-B COMPUTER APPLICATION (Practical) & E-BUSINESS APPLICATION (Practical)

Full Marks 100Internal Assessment:20 marksSemester-end Examinations:80 marksTotal100 marks

Marks shown against the units indicate marks for Semester-end Examinations

Module ICOMPUTER APPLICATION (Practical)Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: C++ [20 classes / 20 marks] Unit 2: Use of Accounting software package – ACE, TALLY [20 classes / 20 marks]

Module II :E-BUSINESS APPLICATION (Practical)

Internal Assessment:10 marksSemester-end Examinations:40 marksTotal50 marks

Unit 1: HTML & DHTML Unit 2: JAVA [20 classes / 20 marks] [20 classes / 20 marks]

1. Oops Concept and Introduction to JAVA. 2. An overview of Java. 3. Data Types - variables and arrays. 4. Operators, Control statements. 5. Classes and objects. 6. Inheritance. 7. String and string buffer. 8. Exception handling. 9. Applets.

M: Marks allotted to the Unit; L: No. of Lectures /Classes for the Unit


UNIVERSITY OF CALCUTTA

Notification No. CSR/ 34 /18

It is notified for information of all concerned that the Syndicate in its meeting held on 13.07.2018 (vide Item No.11) approved the Syllabus and Regulations of Two-Year (Four-Semester) M.Com. Course of Study under CBCS in the Post-Graduate Departments of the University and in the affiliated Colleges offering Post-Graduate Courses under this University, as laid down in the accompanying pamphlet.

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 13th August, 2018

(Debabrata Manna)

Deputy Registrar (Acting)



Regulation for Two Year (Semesterised) Post Graduate Degree in Master of Commerce Course under Choice Based Credit System, 2018

1. General

- **1.1.** The Regulation shall be known as *Regulation for Two Year (Semesterised) Post Graduate* Degree in Master of Commerce Course under Choice Based Credit System, 2018.
- **1.2.** The regulation is meant for the course of study leading to the Post-graduate degree in Master of Commerce (hereinafter referred to as M.Com Course or Course) of the University of Calcutta (hereinafter referred to as University) and shall be conducted by the Department of Commerce, University of Calcutta and affiliated Under-graduate Colleges allowed to conduct the Course.
- **1.3.** The Regulation shall come into effect from the Academic Year 2018-19.
- **1.4.** The University may lay down, from time to time, such subsidiary rules of admission, course of study, methods of examination etc., as may be deemed necessary for the maintenance of appropriate standard of University Education.
- **1.5.** The medium of instruction for the M.Com course shall be English only. However, candidates may answer the examination papers in either English or Bengali.

2. Definition of Key Terms Used in the Regulation

- **2.1. Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- **2.2. Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed papers (core, elective or any other papers).
- **2.3.** Credit: A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.
- **2.4.** Credit Point: It is the product of grade point and number of credits for a paper.
- **2.5. Grade Point**: It is a numerical weight allotted to each letter grade on a 10-point scale.
- **2.6.** Cumulative Grade Point Average (CGPA): It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points

secured by a student in various papers in all semesters and the sum of the total credits of all papers in all the semesters. It is expressed up to three decimal places.

- **2.7. Letter Grade:** It is an index of the performance of students in a course. Grades are denoted by letters such as A++, A+, A, B+, B, C and F.
- **2.8. Semester Grade Point Average (SGPA)**: It is a measure of performance of work done in a semester. It is the ratio of total credit points secured by a student in various papers registered in a semester and the total credits taken during that semester. It shall be expressed up to three decimal places.

3. Course Structure

3.1. The M.Com Course shall be a two year post graduate degree course divided into Four Semesters (each of six months duration).

Year	Semester	Time Frame
First Year	First Semester	July – December
	Second Semester	January - June
Second Year	Third Semester	July – December
	Fourth Semester	January - June

3.2. The four semesters will be conducted as per the following time frame.

3.3. The total marks of the M.Com Course shall be 1100 with the following semester-wise distribution.

Semester	No. of Papers	Total Marks	Total Credit
First Semester	05	250	20
Second Semester	05	250	20
Third Semester	06	300	24
Fourth Semester	06	300	24
Total	22	1100	88

The above structure conforms to Choice Based Credit System (CBCS) with sixteen (16) Core Papers, two (02) Generic Elective Papers as well as four (04) Discipline Specific Elective (DSE) Papers which are offered during the third and fourth semester (two DSEs in each of third and fourth semester). In short, the semester-wise distribution of papers shall be as follows:

Semester	Papers
First Semester	4 Core Papers (Paper No. 101 to 104)
	1 Generic Elective Paper (Paper No. 105)*
Second Semester	5 Core Papers (Paper No. 201 to 205)
Third Semester	4 Core Papers (Paper No. 301 to 304)
	2 DSE Papers (Paper No. 305 & 306)
Fourth Semester	3 Core Papers (Paper No. 401 to 403)
	1 Generic Elective Paper (Paper No. 404)*
	2 DSE Papers (Paper No. 405 & 406)

* The Generic Elective (GE) Papers may be opted by students of other disciplines also, provided they are allowed by the respective departments.

3.4. The Course shall offer five (05) groups of Discipline Specific Electives (four papers in each group) of which only the first two groups shall be offered to the students of Day Section and all five groups shall be offered to the students of Evening Section. However, any specific group shall be offered only if the no. of applicants for that group exceeds 25% of the intake. For this purpose, the choice for selection of the elective group must be made by the students during the second semester at an appropriate time and in an appropriate manner as to be decided by the Department. Every student has to select only one elective group among the groups offered to him. The Elective Groups are as follows:

Elective Group of DSE Papers	Specialization Offered
GROUP A	Accounting & Finance
GROUP B	Banking & Insurance
GROUP C	Marketing Management
GROUP D	Taxation
GROUP E	E-Commerce

3.5. Each paper (Core, GE or DSE) shall have two modules. The paper-wise syllabus of the Course is given in Annexure II. The syllabus, however, shall be amenable to changes, if so required, by the appropriate authorities from time to time.

4. Admission Procedure

4.1. The minimum qualification for the admission to the Course shall be a second class B.Com (Three Year Honours) degree (after completion of 10+2 years' course of study) of University of Calcutta or a similar degree of any other university/ institution as equivalent thereto as per the rules framed by the University of Calcutta from time to time

4.2. Admission process for the Course shall start after the declaration of results B.Com (Three Year Honours) Course of University of Calcutta. The detail guidelines for admission procedure shall be announced by the University.

4.3. Of the total number of seats (i.e., intake), 60% of the seats shall be reserved for the students passing out from the University of Calcutta. Balance 40% of the total seats shall remain open to students of all UGC recognized universities including the University of Calcutta. For the balance 40% seats, selection shall be made on the basis of a written test or by any other appropriate means as decided by the University.

4.4. Reservation Policy, as per the notifications issued by the University from time to time, shall be strictly adhered to during the admission process.

4.5. The applicant must have passed Graduation Examination (i.e. 10+2+3) not earlier than one year from the date of application for the M.Com Course in the University.

4.6. Candidates already admitted in the previous year will not be permitted to take fresh admission again.

4.7. A student who is selected for enrolment in the Course will have to complete admission procedure within the notified time period.

4.8. A candidate admitted to the M.Com. Course shall be registered as a student of the University of Calcutta. Hence the enrolled candidates, who have graduated from the universities other than the University of Calcutta, must get themselves registered with the University of Calcutta within the notified time period.

4.9. A student of M.Com. Course shall not be permitted to seek admission concurrently to any other equivalent or higher degree course in this university.

5. Examination

5.1. Eligibility criteria for appearing for the semester examinations

5.1.1. Students admitted to the M.Com. Course shall compulsorily pursue the regular course of lectures and other academic arrangements made for the Course. A student must have the required attendance to be eligible to appear for the Semester-end Examinations. For this purpose, the required attendance shall be at least 65% of the classes held as a whole in the respective semester. Candidates having attendance of 55% and more but less than 65% will be treated as non-collegiate. These candidates may be condoned by the University and allowed to appear in

the Semester-end Examination. However, they shall have to pay a condonation fee as per the notification. Candidates having attendance of less than 55% shall be treated dis-collegiate and they shall not be allowed to appear in the respective Semester-end Examination.

5.1.2. For the aforesaid purpose, the attendance of a candidate in first semester shall be counted from the date on which the classes begin or from the date on which he/she is admitted, whichever is later. For all the subsequent semesters, the same shall be calculated from the date on which the classes in the respective semester begin. The name of a student, who is continuously absent for 15 working days, shall be struck off the Rolls.

5.1.3. A student against whom there are any disciplinary charges may not be permitted to appear in the Semester-end Examination and written test for Internal Assessment.

5.1.4. A candidate may pursue the course of study of a subsequent semester without appearing in the Semester-end examination of the previous semester subject to clause 5.2.3.

5.1.5. A student, who satisfies the above attendance criteria (5.1.1) and who is not debarred from appearing in the examination for any other reason (5.1.3), must submit the examination form and requisite fee within the stipulated time period as per the notification.

5.1.6. The paper setters, examiners, moderators/board of moderators and re-examiners for each paper shall be appointed by the University Authorities on the recommendations of the Post-graduate Board of Studies.

5.2. Evaluation Process

5.2.1. The evaluation process shall comprise of Semester-end Examination and Continuous Internal Assessment (CIA). For each paper, 80% of the total marks (i.e. 80% of 50 = 40) shall be allotted for Semester-end Examinations and 20% of the total marks (i.e. 20% of 50 = 10) shall be allotted for CIA.

Semester	Examination Time Frame
First Semester	December-January
Second Semester	June-July
Third Semester	December-January
Fourth Semester	June-July

5.2.2. Semester-end Examinations shall ordinarily be conducted as per the following time frame:

Duration of each paper of Semester-end Examination will be of 2 hours.

5.2.3. Out of the 10 (ten) marks allotted for CIA, 8 (eight) marks shall be allotted for Mid-term Assessment (in form of written examination/project/practical in case of Paper No.CC.302 Information Systems and Computer Applications) to be conducted by the Department/affiliated colleges offering the Course. A candidate shall be given only one chance of such assessment (i.e. his first time of being admitted in the respective semester). A student who fails to appear in the Mid-term Assessment will be awarded Zero mark.

5.2.4. An Examination shall be held always under the current syllabus.

5.2.5. The balance of 2 (two) marks allotted for CIA shall be allotted for class attendance in the following manner:

Attendance Percentage	Marks Allotted
80% and more	02 marks per paper
65% and more but less than 80%	01 mark per paper
Less than 65%	Nil

5.3. Minimum Qualifying Marks

5.3.1. Qualifying marks for each paper shall be 40%. A candidate obtaining CGPA 4.000 and above taking all four semesters shall be declared to have passed the M.Com Course. If any paper has theory as well as a practical part, the candidate has to pass in theory and practical part, separately.

5.4. Re-examination

5.4.1. A candidate shall be eligible to have his/her papers re-examined/reviewed if he/she appears at the concerned Semester-end Examination, as a whole.

5.4.2. In any semester, re-examination shall be allowed only in two papers (maximum). However, to be eligible for re-examination, the candidate must obtain at least 40% marks in the remaining papers.

5.4.3. Application for re-examination must be submitted within the stipulated date notified by the University after the publication of results of the respective semester. Requisite fee has to be submitted as per notification.

5.4.4. If the marks after re-examination are reduced by more than 5% or increased by more than 15% (of the total marks in written examination) from the original marks given by the first examiner, the answer scripts shall be subject to evaluation by a third examiner. Among the marks

awarded by the three examiners i.e. first examiner, re-examiner and third examiner, *the average of the two closer marks obtained* will be finally awarded.

5.4.5. Re-examination is not applicable for practical papers, practical part of any paper or for CIA portion of any paper.

5.5 Arrear Papers

5.5.1. An arrear paper is defined as one in which a candidate has failed to secure minimum pass marks (i.e. 40%) or in which he/she remains absent in the Semester-end Examination. A student shall be permitted to appear in such arrear paper(s) only when the respective Semester-end Examination will be subsequently held.

5.5.2. In case of any paper having both theory and practical part to it, a student will have to appear in the next appropriate semester only for the part (theory or practical) in which he/she has failed or was absent.

5.6. Re-enrolment

5.6.1. If a candidate, after having completed a regular course of study in any semester (i) fails to enroll as a candidate for the Semester-end Examination though he/she was otherwise entitled to do so or (ii) fails to enroll as a candidate for the Semester-end Examination due to reason specified in 5.1.1 or 5.1.3 or (iii) registers but fails to appear in the Semester-end Examination or (iv) appears but fails to secure the minimum qualifying marks (in one or more papers), he/she may appear in the semester-end examination of the concerned semester as a non-collegiate student only. Such a student shall not be permitted to appear for the Internal Assessment again (refer to 5.2.3). Such a non-collegiate candidate will need to pay requisite fee as decided by the University Authorities.

5.6.2. A student with disciplinary charges against him/her (refer to 5.1.3), shall be treated separately and such cases shall be forwarded to the University Authorities for final decision.

5.6.3. A candidate will have to complete the course within a period of maximum four years from the date of admission.

6. Grade Point System and Award of Degree

6.1. Grade Point System

6.1.1. Point Grade System shall be followed for the purpose of Grade Point calculation, as shown below.

Percentage of Marks	Letter Grades	Numerical Grade Points
\geq 90% to 100%	A++	9.0 - 10
\geq 80% but < 90%	A+	8.0-8.9
\geq 70% but < 80%	А	7.0 - 7.9
$\geq 60\%$ but < 70%	B+	6.0-6.9
\geq 50% but < 60%	В	5.0 - 5.9
\geq 40% but < 50%	С	4.0 - 4.9
< 40%	F	-
Absent	Ab	-

a) Numerical Grade Point shall not be calculated in respect of a failed paper.

b) The multiplicative factors shall be 0.10 for all Grades for the purpose of calculating numerical Grade Point.

For Example:

If the student secures P %, where $P \ge 40$, his/her grade point will be $[4.0 + \{(P - 40) \times 0.1\}]$ or simply P×0.10.

If a student scores 52% in a particular paper, his/her grade point for the paper will be $(4.00 + 0.1 \times 12) = 5.20$ or simply, $52 \times 0.10 = 5.2$.

6.1.2. Semester Grade Point Average (SGPA)

The Semester Grade Point Average (SGPA) will be the weighted average of the numerical grade points obtained in all the papers of the given semester, where *Weights* refer to the *Credits* assigned to the concerned papers. If the Numerical Grade Points obtained by a student in different papers of a Semester are denoted by P_i and the credit of the corresponding papers are denoted by C_i , the SGPA will be $[(\Sigma P_i \times C_i) \div \Sigma C_i]$ where i=1 to n, and n= no. of papers in the respective semester. The SGPA shall be shown in the mark sheet up to the third decimal point.

6.1.3. Cumulative Grade Point Average (CGPA)

Cumulative Grade Point Average (CGPA) over four semesters shall be the weighted average of the four SGPAs.

 $CGPA = [\Sigma (SGPA_j \times C_j) \div \Sigma C_j]$ where $SGPA_j$ is the SGPA of the j-th Semester, C_j is the total credit of j-th semester used for Grade Point Calculation and j = 1 to 4. CGPA shall be calculated and shown up to three decimal places.

CGPA	Letter Grade	Remarks
9.000 - 10.000	A++	Outstanding
8.000 - 8.999	A+	Excellent
7.000 - 7.999	А	Very Good
6.000 - 6.999	B+	Good
5.000 - 5.999	В	Average
4.000 - 4.999	С	Satisfactory
0.000 - 3.999	F	Fail

The grade of the candidate on the basis of CGPA will be as follows.

Both SGPA and CGPA will be rounded off to the third place of the decimal and will be shown as such on the mark sheet. The mark sheet issued at the end of each semester shall include the total marks obtained in each paper / module as well as the SGPA, the total marks obtained in that semester and the credit earned in the Semester concerned. The final marks sheet, on completion of four semesters, shall include the SGPA of four Semesters, CGPA, Letter Grade, the marks obtained, total marks and the total Credits earned.

6.1.4. Grace Marks

A candidate who fails to obtain pass mark (in terms of clauses 5.3) in any paper(s) in any semester for **shortage of one mark** shall be awarded **one grace mark** in such paper(s).

6.2. Award of Degree

- a) If a candidate pursuing M.Com course of study, clears all the papers and secures 40% and above marks in aggregate of all semesters or CGPA 4.000 and above, he/she will be declared as obtaining M.Com Degree with his /her CGPA and corresponding Letter Grade (C, B, B+, A, A+ or A++).
- **b)** Successful candidates [as per clause (a) of 6.2] will be issued Certificate by the University in the format given in Annexure I.

Annexure I

(Registration No.)

(Diploma No.)



UNIVERSITY OF CALCUTTA

This is to certify that		
	obtained t	the degree of Master of Commerce with
specialization in	unu	der Semester-wise Choice Based Credit
System in the	(Year)	in this University and that
he/she obtained	\dots (A++/ A+/A/ B+/ B/ 0	C) Grade with CGPA

Senate House (Date of Publication of Result) University of Calcutta

Vice-Chancellor

Annexure II

STRUCTURE OF TWO YEAR M.COM COURSE UNDER SEMESTERIZED CBCS SYSTEM

M.COM FIRST YEAR

SEMESTER 1

CC.101. Organisational Behaviour and Human Resource Management (OBHRM)

- CC.102. Macroeconomics and Business Environment (MEBE)
- CC.103. Statistics for Business Decision (STAT)
- CC.104. Direct Tax (DTAX)
- GE.105. International Business (IB)

SEMESTER 2

- CC.201. Marketing Management (MKTG)
- CC.202. Managerial Economics (ME)
- CC.203. Operations Research (OR)
- CC.204. Indirect Tax and Corporate Tax Planning (ITCTP)
- CC.205. Accounting Theory (ACTH)

SEMESTER 3

CC.301. Strategic Financial Management and Business Valuation (SFMBV)
CC.302. Information Systems and Computer Applications (ISCA)
CC.303. Financial Markets and Financial Engineering (FMFE)
CC.304. Business Ethics and Corporate Governance (BECG)
DSE.305. Selected Group Paper 1 (305A/305B/305C/305D/305E)
DSE.306. Selected Group Paper 2 (306A/306B/306C/306D/306E)

SEMESTER 4

CC.401. Strategic Management (STMGT)
CC.402. Strategic Cost and Management Accounting (SCM)
CC.403. Auditing and Assurance Service (AAS)
GE.404. Business Research Methods (BRM)
DSE.405. Selected Group Paper 3 (405A/405B/405C/405D/405E)
DSE.406. Selected Group Paper 4 (406A/406B/406C/406D/406E)

Discipline Specific Elective Groups offered for selection

GROUP A (ACCOUNTING & FINANCE)

DSE.305A. Corporate Financial Accounting and Reporting (CFAR) DSE.306A. Security Analysis and Portfolio Management (SAPM) DSE.405A. Financial Analysis (FA) DSE.406A. International Finance (IF)

GROUP B (BANKING AND INSURANCE)

DSE.305B. Regulatory Framework of Banking and Insurance Business(RFBIB) DSE.306B. Management of Banking and Insurance Products and Services(MBIPS) DSE.405B. Fund Management in Banking and Insurance Companies (FMBIC) DSE.406B. Risk Management –Tools and Applications(RMTA)

GROUP C (MARKETING MANAGEMENT)

DSE.305C. Integrated Marketing Communication(IMC) DSE.306C. Sales and Distribution Management(SDM) DSE.405C. Consumer Behaviour and Marketing Research(CBMR) DSE.406C. Product Management and Marketing of Services(PMMS)

GROUP D (TAXATION)

DSE.305D. Corporate and International Taxation(CIT) DSE.306D. Direct Tax Procedure(DTP) DSE.405D. Indirect Tax Procedure(ITP) DSE.406D. Computerised Taxation and Return Filing(CTRF)

GROUP E (E-COMMERCE)

DSE.305E. Business Models in E-Commerce and ICT Applications(BMEC) DSE.306E. Logistic and Supply Chain Management in E –Commerce(LSCM) DSE.405E. Web-Designing and Digital Marketing(WDDM) DSE.406E. E-Commerce Security and Law(ECSL)

MASTER OF COMMERCE

SYLLABUS

2018

(Effective from the academic session 2018-19)

(Under Notification No.....)



DEPARTMENT OF COMMERCE UNIVERSITY OF CALCUTTA

KOLKATA



Objectives of the Course

The 2-year Master of Commerce course (to be conducted under semesterised CBCS system) is offered with an intention to impart specialized knowledge in different domains of business for inculcating an appropriate blend of intellectual skills and moral values in the students. More specifically, the course aims at developing human potential to serve (i) the teaching profession at various levels, (ii) the needs for research in the social sciences, and (iii) the needs of the industry at the micro and macro-levels.

Structure of the Course

Semester	No. of Papers	Total Marks	Total Credit *
First Semester	05	250	20
Second Semester	05	250	20
Third Semester	06	300	24
Fourth Semester	06	300	24
Total	22	1100	88

The total marks of the M.Com Course shall be 1100 with the following semester-wise distribution.

*one credit stands for one hour of teaching per week.

The above structure conforms to Choice Based Credit System (CBCS) with sixteen (16) Core Papers (CC), two (02) Generic Elective (GE) Papers as well as four (04) Discipline Specific Elective (DSE) Papers which are offered during the third and fourth semester (two DSEs in each of third and fourth semester). In short, the semester-wise distribution of papers shall be as follows:

Semester	Papers
First Semester	4 Core Papers (Paper No. 101 to 104)
	1 Generic Elective Paper (Paper No. 105)*
Second Semester	5 Core Papers (Paper No. 201 to 205)
Third Semester	4 Core Papers (Paper No. 301 to 304)
	2 DSE Papers (Paper No. 305 & 306)
Fourth Semester	3 Core Papers (Paper No. 401 to 403)
	1 Generic Elective Paper (Paper No. 404)*
	2 DSE Papers (Paper No. 405 & 406)

* The Generic Elective (GE) Papers may be opted by students of other disciplines also, provided they are allowed by the respective departments.

The Department will offer five DSE groups subject to the conditions laid down in the Regulation.

The papers to be taught in different semesters are as follows:

SEMESTER 1
CC.101. Organisational Behaviour and Human Resource Management (OBHRM)
CC.102. Macroeconomics and Business Environment (MEBE)
CC.103. Statistics for Business Decision (STAT)
CC.104. Direct Tax (DTAX)
GE.105. International Business (IB)

SEMESTER 2

CC.201. Marketing Management (MKTG)

CC.202. Managerial Economics (ME)

CC.203. Operations Research (OR)

CC.204. Indirect Tax and Corporate Tax Planning (ITCTP)

CC.205. Accounting Theory (ACTH)

SEMESTER 3

CC.301. Strategic Financial Management and Business Valuation (SFMBV)
CC.302. Information Systems and Computer Applications (ISCA)
CC.303. Financial Markets and Financial Engineering (FMFE)
CC.304. Business Ethics and Corporate Governance (BECG)
DSE.305. Selected Group Paper 1 (305A/305B/305C/305D/305E)
DSE.306. Selected Group Paper 2 (306A/306B/306C/306D/306E)

SEMESTER 4

CC.401. Strategic Management (STMGT) CC.402. Strategic Cost and Management Accounting (SCM) CC.403. Auditing and Assurance Service (AAS) GE.404. Business Research Methods (BRM) DSE.405. Selected Group Paper 3 (405A/405B/405C/405D/405E) DSE.406. Selected Group Paper 4 (406A/406B/406C/406D/406E)

Discipline Specific Elective Groups offered for selection

GROUP A (ACCOUNTING & FINANCE)

DSE.305A. Corporate Financial Accounting and Reporting (CFAR) DSE.306A. Security Analysis and Portfolio Management (SAPM) DSE.405A. Financial Analysis (FA) DSE.406A. International Finance (IF)

GROUP B (BANKING AND INSURANCE)

DSE.305B. Regulatory Framework of Banking and Insurance Business(RFBIB) DSE.306B. Management of Banking and Insurance Products and Services(MBIPS) DSE.405B. Fund Management in Banking and Insurance Companies (FMBIC) DSE.406B. Risk Management –Tools and Applications(RMTA)

GROUP C (MARKETING MANAGEMENT)

DSE.305C. Integrated Marketing Communication(IMC) DSE.306C. Sales and Distribution Management(SDM) DSE.405C. Consumer Behaviour and Marketing Research(CBMR) DSE.406C. Product Management and Marketing of Services(PMMS)

GROUP D (TAXATION)

DSE.305D. Corporate and International Taxation(CIT) DSE.306D. Direct Tax Procedure(DTP) DSE.405D. Indirect Tax Procedure(ITP) DSE.406D. Computerised Taxation and Return Filing(CTRF)

GROUP E (E-COMMERCE)

DSE.305E. Business Models in E-Commerce and ICT Applications(BMEC) DSE.306E. Logistic and Supply Chain Management in E –Commerce(LSCM) DSE.405E. Web-Designing and Digital Marketing(WDDM) DSE.406E. E-Commerce Security and Law(ECSL)

Detailed Course Content First Semester

Paper CC.101: Organisational Behaviour and Human Resource Management

Module I: Organisational Behaviour

- 1. The concepts of organisation concepts and understanding of Organisational Behaviour Organisational Behaviour in the global context.
- 2. The individual in the organisation personality, values, attitudes, perception and learning.
- 3. Groups in organisation foundations of group behaviour informal and formal groupscreativity and group decision making.
- 4. Group dynamics- power and politics- organizational conflicts and resolution –organizational culture.

Module II: Human Resource Management

- 5. Introduction: Importance of Human Resource (HR) in an organization; meaning of Human Resource Management (HRM); evolution of the concept of HRM; objectives and functions of HRM; models in HRM; emerging challenges in HRM; HR accounting and HR audit.
- 6. Acquiring Human Resource: Human Resource Planning (HRP); Job Design and Job Analysis; Recruitment and Selection; basic concept of Socialisation, Orientation and Placement.
- Development and Evaluation: Basic concept of Training and Development; Performance Management – concept, Performance Appraisal methods, barriers to effective Performance Appraisal.
- Compensation: Compensation management concept, process of Compensation Management; Job Evaluation; Incentives and Benefits – meaning and types.

- Aswathappa, K., Organisational Behaviour, Himalaya Publishing.
- Luthans, F, Organisational Behaviour, McGraw Hill
- Moorhead and Griffin, Organisational Behaviour, Houghton- Mifflin
- Newstrom and Davies, Organisational Behaviour:Human Behaviour at work, Tata McGraw Hill

- Robbins, S.P., Organisational Behaviour, Prentice Hall.
- Sukla, M., Understanding Organisations: Organisation Theory and Practice in India, PHI.
- Prasad, L. M., Human Resource Management, Sultan & Chand 2001
- Aswathappa, K., *Human Resource and Personnel Management*, Tata McGraw Hill Publishing Co. 1999
- Desslor, G., Human Resources Management, Pearson Education 2004
- Rao, S. & Rao, V.S.P., *Personnel/Human Resources Management*, Konark, Publishers Pvt. Ltd. 1997
- Memoria C.B., Personnel Management, Himalaya Publishing House 2002
- Decenzo, D., & Robbins, R., *Personnel/Human Resource Management*, Eastern Economy Publication 1999

Paper CC.102: Macroeconomics and Business Environment Module I

- 1. National Income Accounting: Measurement of GNP/ National Income-it's accounting.
- 2. **Equilibrium Income:** Cases of Open and Closed Economies, Multiplier theory-Keynesian Approach.
- 3. General Equilibrium: Aspects of Closed Economy-Commodity market and money market equilibrium -IS-LM Approach.
- 4. **Open Economy:** Short-run-aspects- IS-LM model.

Module-II

- 5. Inflation: Demand pull and Cost push theories.
- 6. Investment: Present value and Internal rate of return criteria.
- 7. Growth: Neo-classical growth theory- Solow model.
- 8. India's Macro Economy: Behaviour- National Income -its composition and trends.
- 9. India's Business Environment: Government Policies towards FDI and FII.

Suggested Readings:

- Branson, W., Macroeconomic Theory and Policy, Harper International
- Froyen. T R., Macroeconomics, Macmillan India Ltd.
- Mankiw, G.N; Macroeconomics, CBS Publication & Distribution, New Delhi
- Misra and Puri, Indian Economy, Himalaya Publishing Co;
- Samuelson, P. A and Nordhus, W.D., Economics, Tata Mc Graw Hill Publication Co Ltd.

Paper CC.103: Statistics for Business Decisions Module-I

- **1. Probability Theory:** Meaning of probability; Different definitions of probability; Total probability theorem; Conditional probability; Compound probability; Independent events; Bayes' theorem on conditional probability.
- 2. Random Variable and Theoretical Probability Distributions: Random variable; Probability distribution; Expectation, Varianceand moments of a random variable; Binomial, Poisson, Normal and Exponential distributions and their properties; Joint distribution of two random variables(discrete only).
- **3. Sampling Theory:** Basic concept of sampling; Sampling and non-sampling errors; Practical methods of selecting random sample; Random and non-random sampling techniques; Sampling distributions (statement only); Sample size decisions.
- Estimation: Concept of point and interval estimation; Properties of a good estimator; Methods of estimation (Moments method, Maximum likelihood method, Least squares method).

Module-II

- **5.** Test of Hypotheses: Basic concepts of hypothesis testing; Small sample and large sample parametric tests; Tests based on Z, t, Chi-square and F statistic; Confidence intervals; Non-parametric tests.
- **6. Analysis of Variance:** Analysis of one-way classified data; Analysis of two-way classified data with one observation per cell.
- 7. Multiple Regression Analysis: Multiple linear regression model; Multiple and partial correlations; Problems of regression.

 Business Forecasting Models: Components of time series; Decomposition method;Exponential smoothing models; Basic concept of Box-Jenkins methodology (ARIMA models); Important issues related to forecasting.

Suggested Readings:

- Das, J. K., Statistics for Business Decisions, Academic Publishers.
- Gupta, S. C., Fundamentals of Statistics, Himalaya Publishing House
- Hanke, J. E., WiChern, D. W. and Reitsch, A. G., *Business Forecasting*, Prentice Hall of India
- Hooda, R. P., Statistics for Business and Economics, Macmillan.
- Anderson, Statistics for Business and Economics, Cengage.
- Johnson, R. A. and Wichern, D. W., Business Statistics, John Wiley and Sons
- Makridakis, S., Wheelwright, S. C. and Hyndman R. J., *Forecasting Methods and Applications,* John Wiley and Sons
- Sharma, J. K. , Business Statistics, Pearson Education
- Sounderpandian, J. and Aczel, A. D., Complete Business Statistics, Tata McGraw Hill

Paper CC.104: Direct Tax

Module I

- 1. Income Tax
- a) Exemptions under section 10AA of Income Tax Act 1961
- b) Profits and Gains of Business or Profession
- c) Capital Gains(with emphasis on business restructuring)
- d) Income from other sources(with emphasis on deemed dividend)
- e) Deductions from GTI

Module II

- 2. Taxation of dividend (including inter-corporate dividend)
- a) Taxation of LLP and AMT
- b) Taxation of companies and MAT
- c) Relief for double taxation

Suggested Readings:

- Singhania, V. K., *Direct Taxes*, Taxmann.
- Ahuja & Gupta, Direct Taxes: Law & Practice, Bharat
- Bare Act, Income Tax Act (as amended), Taxmann.
- *Income Tax Rules*, Taxmann.

Paper GE. 105: International Business

Module I

- International Business: Concept, Importance, Composition, Difference with Domestic Business, Trends in International Business, Change in Compositional significance of Trade and Foreign Direct Investment (FDI) under Globalization - their Significance.
- The Foreign Exchange Market: Meaning, Functions, Structure, Quotations Direct and Indirect quotes, Demand and Supply of Foreign Exchange, Exchange Rate – Changes and its impact, Different Exchange Rate Regimes and their Mechanisms, Currency War in the context of Devaluation of home currency, Risk Management: Spot Covering and Forward Covering, Speculation in Spot and Forward Markets, Concepts of Forward Premium and Discount.
- 3. **Balance of Payments:** Definition, Composition, Identity and Equilibrium, Fundamental Disequilibrium
- 4. Multinational Corporations: Basic Concept, Major Vehicles of FDI their Inherent Disadvantages in Host Countries - their Advantages (Dunning's OLI Framework) - their Cost Advantage (rigorous proof required) through transfer of their Knowledge-based Assets - Conditions of Host Country Welfare Gains from Multinational Investment vis-avis autarkic situation (rigorous derivation required).
- 5. Regional Economic Integration & International Economic Institutions

Module II

- Global Strategic Management: Concept of Global Strategic Management; Theory of Global Competitiveness Alignment- Mapping competitiveness shifts; Porter's Diamond Model of Competitive Advantage; the 10-P Model of Global Strategic Management.
- 7. The Strategy and Organization of International Business: Strategy in international business-motivation and pressures in internationalization, the global firm as a value chain, Internationalization strategies; organization of international business structure, control systems, and culture.
- 8. **Market Entry Strategy:** Entry objectives; scale of entry; timing of entry; entry modes trading, contractual and investment modes.
- 9. **Global Business Operations:** Global manufacturing; Global marketing management; Global human resource management; managing global projects.

- Chacholiades Miltiades, International Economics, McGraw Hill.
- Hill Charles WL and Jain A.K., *International Business*, Tata McGraw Hill.
- Cherunilam, Francis: International Business Environment, Himalaya Publishing House, Mumbai.
- Reid W. Click and Jashua D. Coval: *International Financial Management*, Pearson Education.
- Collis, David, International Strategy: Context, Concepts and Implications, Wiley.
- Lasserre, Phillipe, Global Strategic Management, Palgrave.
- Markusen, Melvin, Kaemfer and Maskus, *International Trade Theory and Evidence*, McGraw Hill.
- Rugman and Hodgetts, International Business: A Strategic Management Approach, Pearson.

Second Semester Paper CC.201: Marketing Management Module I

- Introduction; Concept; Consumer and Societal orientation; Customer Relationships; Consumerism; Rural Marketing
- 2. Market Segmentation and Product Differentiation; Marketing Environment; Adopting Competitive Strategies
- Concept of Marketing Mix of Product and Service; Product Mix Decisions; New Product Development Process, Product Life Cycle, Brand Management decisions

Module II

- 4. Price; Resale Price Maintenance; Factors to consider while setting price, Pricing strategies
- New Product Adoption Process; Market Diffusion Stages; Factors influencing Individual Buying Behaviour
- Nature and Importance of Marketing Channels; Channel Management Decisions; Nature and Importance of Marketing Logistics; Logistics Functions; Steps; Sales Promotion; Public Relation; Advertising and Publicity.

- Kotler and Armstrong, *Principles of Marketing*, Pearson Education.
- Ramaswamy and Namakumari, *Marketing Management, Planning, Implementation and Control*, Macmillan.
- Etzel, Walker, Stanton and Pandit, Marketing Concepts and Cases, McGraw Hill.
- Saxena, Marketing Management, McGraw Hill.
- Lamb, Hair and Sharma, Marketing: A South-Asian Perspective with CourseMate, Cengage
- Perreault and McCarthy, *Basic Marketing*, McGraw Hill.
- Perreault and McCarthy, Basic Marketing: A Global Managerial Approach, McGraw Hill.

Paper CC.202: Managerial Economics

Module I

- Scope: Scarcity and Choice, Production Possibility Curve Applications of Economic theory in Managerial Decision Making - Incremental Reasoning, Opportunity Cost Principle and Discounting - Concepts of Total, Average and Marginal - Optimization Methods.
- 2. **Demand Theories and Applications:** Consumer Theory Choice under Uncertainty, Elasticity concepts and applications Demand Estimation and Forecasting.
- 3. Production and Cost: Short-run and Long-run Aspects.
- Pricing and Market Structures: Perfect Competition, Monopoly and Discrimination, Monopolistic Competition, Oligopoly.

Module II

- 5. Risk and Uncertainties in Managerial Decision Making: Decision Criteria and Applications
- 6. **Managerial Theories of Firm:** Sales Maximization with and without Profit Constraint Williamson and Marris Models Satisfying Behaviour: Cyert and March.
- 7. Factor Pricing: Basic Principles Impact under different market conditions.
- 8. **Market Failures and Applications of Welfare Economics:** Conflicts of Efficiency and Equity Correction of External Diseconomies through Government Policies

- Ferguson and Gould, Microeconomic Theory
- Henderson, J.M. and Quandt, R.E., Microeconomic Theory,
- Koutsoyannis, M. Modern Microeconomics, Macmillan India Ltd.
- Maddala and Miller E., *Microeconomics*
- Pyndick and Rubinfield, Microeconomics, PHI, New Delhi+
- Salvatore, D., Managerial Economics in a Global Economy, Harcourt Collins Publications
- Panneerselvam and Sivasankaran, Managerial Economics, Cengage.
- Salvatore, D., Managerial Economics, McGraw Hill

Paper CC.203: Operations Research

Module-I

- 1. Linear Programming Problem: Linear programming problem formulation; Graphical solution; Simplex method; Sensitivity analysis; Duality; Dual simplex method.
- 2. **Transportation and Assignment Models:** Transportation problems; The trans-shipment problem; Assignment problems; The travelling salesman problem.
- 3. **Simulation Models:** Discrete simulation models; Continuous simulation models; Formulation and solution technique; Monte-Carlo simulation; Applications to business problem.
- 4. **Decision Theory and Game Theory:** Decision under uncertainty; Decision under risk expectation principle, Decision tree approach; Utility theory; Game theory; Two person zero sum game; Pure and mixed strategy games.

Module-II

- 5. **Replacement Decisions:** Replacement of capital equipments; Preventive maintenance replacements with constant and varying money value; Group replacement decision.
- 6. **Queuing Models:** Role of Poisson and Exponential distributions; Arrival and service pattern; Single server model; Multiple server model; Queuing decision models.
- 7. **Network Analysis:** Network diagram; Time estimate for activity; programme evaluation and review technique; Critical path method; Project time-cost trade-off.
- 8. **Inventory Control and Sequencing Models:** Deterministic and probabilistic inventory models; Discrete and continuous inventory models, Price-discount inventory control models. Assumptions and algorithm for solving sequencing problems; Johnson's rule; Maintenance crew scheduling.

- Anderson, Q. R., Sweeny, D. J. and Williams, T. A., *An Introduction to management Science,* Cengage
- Gupta, P. K and Hira, D. S., Problems in Operations Research, S Chand & Co.
- Kapoor, V. K, *Operations Research*, Sultan Chand and Sons
- Natarajan,_. M., Balasubramani, P. And Tamilasari, A., *Operations Research*, Pearson Education
- Sharma, J. K, Operations Research: Theory and Methods, Macmillan
- Srivastava, U. K, Shenoy, G. V. and Sharma, S. c., *Quantitative Techniques for Managerial Decisions*, New Age International
- Taha, H., *Operation Research*, Prentice Hall
- Vohra, N. D., Quantitative Techniques in Management, Tata Mcgraw Hill

Paper CC.204: Indirect Tax and Corporate Tax Planning

Module I

- 1. Goods and Services Tax
- 2. Customs Duty

Module II

- 3. Tax Planning under:
 - (a) different heads of income
 - (b) set off and carry forward of losses
 - (c) deductions under Chapter VI- A
 - (d) financial management decisions(Capital Structure, Dividend Policy, Bonus Shares,
 - Buyback of shares)
 - (e) Business Restructuring.

Suggested Readings:

- Datey, V.S., Indirect Taxes: Law and Practice, Taxmann.
- Datey, V.S., GST Law & Practice with Customs and FTP, Taxmann
- Bare Act: Central Goods and Services Tax Act, 2017
- Bare Act: West Bengal State Goods and Services Tax Act, 2017
- Bare Act: Integrated Goods and Services Tax Act, 2017
- Central Goods and Services Tax Rules, 2017
- West Bengal Goods and Services Tax Rules, 2017
- Integrated Goods and Services Tax Rules, 2017
- Singhania, V.K., Direct Taxes Law and Practice with special reference to Tax Planning, Taxmann.

Paper CC.205. Accounting Theory

Module – I

1. Theory - Conceptual Issues: Concept of theory and accounting theory; need for accounting theory; interpretational and decision usefulness theories; approaches to accounting theory, methodology in accounting theory; accounting concepts, conventions, principles; Generally Accepted Accounting Principles (GAAP); accounting standards – its meaning, problems of standard setting and setting procedures for Indian and International accounting standards.

- Assets, Liabilities and Accounting for Depreciation: Assets Valuation of fixed assets, Need for valuation of fixed assets - tangible and intangible, valuation of current assets; Liabilities - classification of liabilities, measurement of liabilities, valuation of liabilities; Accounting for depreciation - meaning and causes of depreciation, methods, IAS16 property, plant and equipment, disposal of fixed assets, amortisation and impairments.
- Capital, Value and Profit: Capital Accounting concept of capital, classification of capital, capital vs. income, consumption of capital, maintenance of capital, measurement of the efficiency of business capital; Fair Value Accounting; Analysis of changes in income, Gross profit analysis, comparison of revenues, expenses, gains and losses etc.

Module – II

- Specific issues in corporate reporting: Concepts and objectives of financial reporting; international financial reporting qualities; true blood report and stamp report – objectives; segment reporting and interim reporting – needs and problems, social reporting harmonisation in reporting - need, problem and measures.
- 5. Globalisation of accounting standards: Meaning of standardization, International Financial reporting standards issued by the IASB; the structure of IFRS; Process of IFRS standard setting; Problems in understanding and application of IFRS; IFRS adoption or convergence in different countries, relative view of Ind-AS, IFRSs and IASs.
- **6. Contemporary issues in accounting:** Human Resource Accounting its meaning, need and methods; conceptual framework of Balance Scorecard, Economic value added, Cost benefit analysis, Social, Environmental, Intellectual capital, Forensic accounting and reporting etc.

- Barry J. Epstein, Eva K. Jermakowicz, John: *Interpretation and Application of International Financial Reporting Standards,* Wiley Publications.
- Ghosh T.P.: IFRSs for Finance Executives, Taxmann Allied Services Private Limited.
- Glautier and Underdown: Accounting Theory and Practice, Pitman Publishing
- J. Madegowda and Inchara P.M.Gowda: *Accounting Theory and Analysis*, Himalaya Publishing House.

- Kamal Garg: IFRS Concepts and Applications, Bharat Law House Pvt. Limited.
- Jawaharlal: Accounting Theory and Practice, Himalaya Publishing House.
- Jawaharlal: Corporate Financial Reporting: Theory and Practices, Taxmann Publication.
- P. Mohana Rao: Accounting Theory and Standards, Deep and Deep Publications.
- Porwal, L.S.: Accounting Theory An Introduction, Tata McGraw Hill, New Delhi.
- Mukherji, K and Ray, G.D.: Studies in Accounting Theory, The World Press Pvt. Ltd.
- Rawat D.S.: Accounting Standards, Taxmann Allied Services Private Limited.
- Sinha, Gokul: Accounting Theory & Management Accounting, Book World.

Third Semester

Paper CC. 301: Strategic Financial Management and Business Valuation

Module I: Strategic Financial Management

- 1. **Introduction:** Concepts and Importance of Strategic Financial Management, Strategic Financial Decision Making, Financial Policy and Strategic Management.
- 2. **Investment Decisions:** Complex Capital Budgeting Decisions, Capital Rationing, Risk Analysis in Capital Budgeting, Inflation Impact on Capital Budgeting Decisions, Lease Financing, Leveraged Lease, Hire Purchase Financing.
- 3. Cost of Capital & Dividend Decisions: Significance, Weighted Average Cost of Capital, Marginal Cost of Capital, Divisional and Project Cost of Capital, Dividend Decisions Modigliani and Miller Dividend Irrelevance Theory.
- 4. **Financing Decisions:** Theories of Capital Structure Modigliani and Miller Approach, Effect of Bankruptcy Costs, Agency Costs and other Imperfections, Donaldson's Pecking Order Theory, Signaling or Asymmetric Information Theory, Leverage- Operating, Financial and Combined.
- 5. Working Capital Management Decisions: Operating Cycle and its Relevance, Receivables Management, Inventory Management, Cash Management- Baumol's Model, Beranek Model and Miller-Orr Model.
- 6. **Project Financing Decisions:** Infrastructure Project Financing, Financing of PPP projects, Startup Financing.

Module II: Business Valuation

- 7. **Discounted Cash Flow Valuation**: Free Cash Flow Techniques, Terminal Valuation, Growth Estimation Time series models, Impact of Leverage on Risk and Valuation.
- 8. Relative Valuation: Earning Multiples, Book Value Multiples, Revenue Multiples.
- 9. Probabilistic Valuation Approaches: Scenario Analysis, Decision Trees, Simulations.
- 10. Valuation (Special Cases): Startup Firms, Financial Service Firms, Distressed Firms and Private Firms.
- 11. Acquisitions, Takeovers and Corporate Restructuring: Valuation of Synergy, Valuation of Control, LBO Valuation, Divestitures, Anti-Takeover Defenses.
- 12. Case Studies: Latest Indian Corporate Restructuring Cases and Cross-Border Acquisitions & Takeovers Cases.

Suggested Readings:

- Van Horne, J.C., Financial Management & Policy, Pearson.
- Brigham, Fundamentals of Financial Management, Cengage Learning
- Brealey & Myers, Principles of Corporate Finance, McGraw Hill.
- Pandey, I.M., Financial Management, Vikas Publishing House.
- Srivastava, R. and Misra, A., Financial Management, Oxford.
- Banerjee, B., Financial Policy and Management Accounting, PHI.
- Chandra, P., Financial Management: Theory and Practice, Tata McGraw Hill.
- Khan, M.Y. and Jain, P.K., *Financial Management: Text, Problems and Cases*, Tata McGraw Hill.
- Damodaran, A., *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, Wiley.
- Palepu G.K., Business Analysis and Valuation Using Financial Statements, Cengage.
- Weston, J.F., Mitchell, M.L., Mulherin, J.H. &Salwan, P., *Takeovers, Restructuring, and Corporate Governance*, Pearson.
- Arzac, E.R., Valuation for Mergers, Buyouts, and Restructuring, Wiley.

Paper CC.302: Information Systems and Computer Applications

Module - I

Key Information System Concepts: System - concept, properties and types; information
 - concept, qualities, types; Information System - concept, characteristics, levels;
 Information Systems environment - the business environment, the organisation,

information system architecture, information systems applications; computer based information system (CBIS) - operating elements and types.

- 2. Information Systems in Organisations: Transaction Processing systems (with special emphasis on accounting and financial information systems); Management Information and Reporting System; Executive Information system; Decision Support Systems (DSS) including group DSS; Executive Support System; Strategic Information System; Expert Systems and Artificial Intelligence.
- Information System Analysis and Design: The Information System Development Life Cycle Model - tools and techniques, System Development, synergism between major business systems.
- Electronic Commerce and Electronic Data Interchange (EDI): The strategic impact of the Internet; Electronic commerce - drivers, categories of e-commerce applications -B2B, B2C, C2C; e-commerce security and regulations; Intranets, Extranets; Electronic Data Interchange (EDI) - benefits, EDI transactions and EDI applications.
- 5. Business Process Reengineering and Enterprise Resource Planning (ERP): The process of Reengineering work, Organizational impact of reengineering, Information Technology and Business Process Redesign, Management Challenges in Business Process Redesign; Enterprise Resource planning (ERP) the need for integrated management information for value chain management, business modelling for ERP, Implementation of ERP.
- 6. Information Systems Control and Security: Evaluation of information systems using cost-benefit analysis; Information system audit; Information Technology Act; Information security policy; Nature and Types of Computer Crimes; Ethical and social issues relating to information system; Ethics for an information society.
- 7. Information Systems for Strategic Advantage: The changing nature of Information technology; Information as a strategic Resource; use of information system for strategic advantage; components of information planning; global business strategies and global information systems; strategic information systems and associated risks.

Module - II

- 8. Computer-Based Business Application and Accounting Package: Introduction and working with word processor; Creating presentation with power point, sound effect and animation effect; Working with accounting software Preparation of vouchers, invoice and salary statements, Maintenance of Inventory and Accounting records, Use of analytical tools, Preparation of financial reports.
- 9. Major Business Process Management and Information Technology: Introduction to various business processes Accounting, Finance, Sale, Purchase etc.; Business process automation benefits and risks; Approach to mapping systems Entity Diagrams, Data Flow Diagrams, Systems Flow diagrams, Decision Trees/Tables, Accounting system vs. Value chain automation; Information as a business asset, Business risks of failure of IT.
- 10. Understanding Major Functional Systems: Marketing & Sales Systems, Finance & Accounting Systems, Manufacturing & Production Systems, Human Resource Systems, Inventory systems, their sub systems, description and organizational level. Overview of latest devices/technologies i5, Bluetooth, Wi-Fi, Touchpad, Ultra-mobile PC etc.
- 11. Enterprise Applications: Overview and types; Information processing and delivery channels and their role in businesses, The relationship between organisations, information systems and business processes; IT as a business enabler and driver Enterprise Systems, Supply Chain Management, Customer Relationship Management & Knowledge Management; Key types of application controls and their need; Virtualization, Grid computing and Cloud delivery model.
- 12. **Project Work:** Statistical and Basic financial analysis with Spread-sheet Application; Developing a business application (using MS-Access/Visual Basic) with adequate Laboratory sessions.

- Basandra, S. K.: Managing Information Systems, Wheeler Publications.
- De, Rahul, *Managing Information Systems in Business, Government and Society*, Wiley Publications.
- Goyal, D.P., Management Information Systems Managerial Perspectives, Macmillan Business Books.

- Murthy, C.S., *Management Information Systems: Text and Application*, Himalaya Publishing.
- Laudon, K.C. and Laudon, J.P., *Management Information Systems: Organization and Technology*, Prentice Hall of India.
- Schultheis, R., and Sumner, M., *Management Information Systems: The Manager's View*, Tata McGraw Hill.
- Turban, Volonino, Wood, Information Technology for Management, Wiley Publications.
- Turban, Aronson, Decision Support System & Intelligent System, Pearson.
- Alter, *Information Systems, Foundation of E Business*, Pearson.
- Blanc, Computer Application for the New Millennium, Vikas Publishing.

Paper CC.303: Financial Markets and Financial Engineering

Module I: Financial Markets

- 1. An Overview of Economy and the Financial System: Introduction—savings, investments and finance—global and Indian financial system—financial system and economic development— financial markets structure—financial markets in globalised financial system.
- 2. Money Market Operations: Introduction—money market and banks—money market and the economy— money market instruments: call or notice money, treasury bills, commercial papers, commercial bills, certificates of deposit, re-purchase agreements money market and the RBI— money market mutual funds (MMMFs)— recent developments in money market.
- Capital Markets: Introduction—equity market: primary and secondary market —long term debt market: corporate and government debt market, Public Sector Units (PSU) bonds market —leading global capital markets—integration of Indian capital markets with global capital markets— capital markets reforms—capital market regulations and role of SEBI.
- Primary Capital Market Operations: Introduction—issue of securities: public issues (IPOs & FPOs, fresh issue of securities & offer for sale), rights issue, bonus issue, private placement (preferential allotment, qualified institutional placement & institutional

placement programme), ADRs, GDRs, IDRs —categories of investors: retail individual investors (RIIs), non-institutional investors (NIIs), and qualified institutional buyers (QIBs) including anchor investors —public issue mechanism: fixed price, book building and pure auction mechanism — book building mechanism: book-building process and role of various intermediaries including merchant bankers, deciding upon the price band, determining cut-off price, red herring prospectus, allotment process through 100 per cent book-building process, application supported by blocked amount (ASBA) procedure — IPO grading process in India—green shoe option operation in public issues — SEBI (ICDR) Regulations, 2009— recent trends in Indian primary capital market.

- 5. Secondary Capital Market Operations: Introduction—an overview of leading stock exchanges: NSE, BSE and OTCEI, —SME exchanges— listing of securities at the stock exchanges and SEBI (LODR) Regulations, 2015—various intermediaries: stock brokers, sub-brokers, depositories: NSDL & CDSL, depository participants, registrar and transfer agents, custodians, clearing corporation/house, FPIs, etc. —demat account and freezing of demat account —de-materialization and re-materialization process of securities stock exchange online trading through depository system—trading and settlement of securities under the depository system: off-market transaction, settlement of market transaction, and transmission of securities—rolling settlement cycles— basics of stock market indices: S&P BSE Sensex 30, S&P CNX Nifty —Recent trends in Indian stock markets.
- Debt Market Operations: Introduction—structure of the Indian debt market: corporate and government debt market, Public Sector Units (PSU) bonds market —participants in the debt markets—debt market instruments.

Module-II: Financial Engineering

 Introduction: Contributing Factors- the Scope of Financial Engineering; Tools of Financial Engineering-Financial Engineering vs. Financial Analysis; Nature and Types of Derivative Securities-Basic Characteristics of Derivative Securities. Indian Derivatives Market-An Overview

- 8. Forward Contracts: Forward Contracts on Currencies -Valuing Forward Contracts-Forward Prices for a Security under Different Situations, Forward Rate Agreement (FRA).
- Futures Contracts: The Nature and Uses of Future Contracts- Mechanics of Buying and Selling, Valuation of Future Contracts-Financial Futures-Stock Index Futures-Foreign Currency Futures-Options on Futures.
- Option Contracts: Types of Option Contracts- Trading, Strategies, Option Valuation Single-period Options vs. Multi-Period Options-Option Pricing-Option Pricing Models-Binomial Model-Black-Scholes Model- Option– Path- Dependent Options - Exotic option Contracts.
- Swap Contracts: Origin of Swap Contracts- Forms of Swap Contracts-Interest Rate Swaps - Pricing of Interest Rate Swaps-Asset Swaps Forward Swaps- Swaptions-Currency swaps-Commodity swaps Over-the-counter Interest Rate Derivatives.
- 12. **Commodity Derivatives**: Trading Strategies in Commodity Futures Markets; International Commodity Market; Regulatory Framework

- Saha, S.S, *Indian Financial System and Markets*, McGraw-Hill Education (India) Pvt. Ltd. ., 2nd reprint, New Delhi.
- Saha, S.S, Merchant Banking and Financial Services, Scholar's Press, Germany.
- Saha, S.S, Capital Markets and Securities Laws, Taxmann Publications Pvt. Ltd., 2nd ed., New Delhi.
- Pathatak, B.V, Indian Financial System, Pearson Education, New Delhi.
- Bhole, L.M, *Financial Markets and Institutions*, New Delhi.
- Khan, M.Y, Indian Financial System, McGraw-Hill Education (India) Pvt. Ltd., New Delhi.
- Khon, M, Financial Institutions and Markets, McGraw-Hill Education (India) Pvt. Ltd., New Delhi
- Machiraju, H.R, Merchant Banking, Vikash Publishing, New Delhi,
- Fabozzi, Modigliani, Jones and Ferri, *Foundations of Financial Markets and Institutions Markets*, Pearson Education, New Delhi.

- Mandura Jeff, Financial Markets & Institutions, West Publishing Company, New York.
- Avadhani, V.A., Investment and securities Markets in India, Himalaya Publishing, New Delhi.
- Mishkin, Fredrick S. and Stanley G. Eakins, *Financial Markets and Institutions*, Pearson Education, New Delhi.
- RBI Guidelines and SEBI Regulations
- Cuthbertson Keith and Nitzsche Dirk , *Financial Engineering: Derivatives and Risk Management,* Jossey Bass
- Hull J.C, Options, Futures and Other Derivatives, Pearson Education
- Kolb Robert W. and Overdhal James A, Futures, Options and Swaps, Wiley
- Lyuu Yuh-Dauh, *Financial Engineering and Computation-Principles Mathematics and Algorithms*, Cambridge University Press
- Marshall John F and Bansal Vipul K, *Financial Engineering- A Complete Guide to Financial Innovation*, Prentice Hall of India
- Srivastava Rajiv, Derivatives and Risk Management, Oxford University Press

Paper CC.304: Business Ethics and Corporate Governance

Module I: Business Ethics

- 1. **Introducing Business Ethics:** The need for and nature of business ethics—ethics versus law, morality, economics, religion; the relationship between business ethics, corporate governance and business leadership; human moral development—masculine and feminine perspectives; levels of ethical analysis; concept of corporate integrity; characteristics of ethically driven business enterprises
- 2. Contextualizing Business Ethics: Concept of stakeholder and stakeholder salience; Stakeholder Theory of the Firm-various forms; Corporate Social Responsibility (CSR) need and significance, Carroll's CSR Pyramid; strategic CSR—traditional and contemporary approach; corporate citizenship and sustainable development—stakeholder thinking in a global context
- 3. Evaluating Business Ethics: Ethical decision-making—Ethical dilemma versus ethical issue, characteristics of ethical dilemmas, stages in ethical decision-making, individual and situational factors influencing ethical decision-making; Ethical reasoning approaches—the teleological approach, the deontological approach, the virtue ethics approach, the systems development approach; ethical universalism, ethical relativism and ethical pluralism.
- 4. Managing Business Ethics: Concept of ethical risk and need for business ethics management; components of business ethics management; different approaches to managing business ethics; managing business ethics in the context of shareholders, employees, consumers, competitors, suppliers, civil society, and government.

Module II: Corporate Governance

- 5. Introduction: Governance-Public Governance System-Corporate Governance System-Comparison between them-Definitions of Corporate Governance- Emergence of the Corporate Sector and Need for Corporate Governance- Governance and Management-Good Corporate Governance
- Theories in Corporate Governance: Agency Theory-Concepts and Core Principles-Problems or Criticisms-Mechanism to Reduce Agency Cost; Stakeholder Theory-Concept and Core Principles-Criticisms
- Corporate Mis-governance: Concept and Definition Some Recent Examples Factors Responsible for Such Mis-governance - Lessons from them-Global Initiatives and Reforms (Some Examples)
- Legal and Regulatory Framework of Corporate Governance: Principal Provisions of the Companies Act, 2013 with Respect to Improve Quality of Corporate Governance-Audit Committee and its Role as per the Companies Act, 2013 -SEBI (LODR) Regulations, 2015 (with latest amendment)

- Boatright, J. R., *Ethics and the Conduct of Business*, Pearson Education.
- Crane, A. And Matten, D. *Business Ethics: Managing Corporate Citizenship and Sustainability in the Age of Globalization*; Oxford University Press.
- Petrick, J.A and Quinn, J.F., *Management Ethics: Integrity at Work*, Response Books.

- Trevino, L.K. and Nelson, K.A. Managing Business Ethics; John Wiley and Sons
- Velasquez, M. G., Business Ethics: Concepts and Cases, Prentice Hall of India.
- Werther, W. and Chandler, D. *Strategic Corporate Social Responsibility*; Sage South Asia Edition.
- A.C. Fernando, *Corporate Governance: Principles, Policies and Practices*, Pearson Education India
- Robert A. G. Monks and Nell Minow, Corporate Governance, Wiley.
- Darryl Reed and Sanjay Mukherjee, *Corporate Governance, Economic Reforms and Development*, Oxford University Press
- P. Chattopadhyay, Corporate Mis-governance, IAA Research Foundation.
- Bob Tricker, *Corporate Governance: Principles, Policies and Practices*, Oxford University Press
- Swami (Dr.) Parthasarathy, *Corporate Governance: Principles, Mechanism and Practices*, Biztantra (Wiley)

Discipline Specific Electives: Group A – Accounting and Finance

Paper DSE.305A: Corporate Financial Accounting and Reporting

Module I

- 1. Disclosures in Company Accounts
- 2. Valuation of corporate securities and business
- 3. Indian Accounting Standards and IFRS
- 4. ASs and Ind ASs a Comparative Study, Ind AS and IFRS Important Carve-outs
- 5. Segment Reporting
- 6. Accounting for Intangible Assets
- 7. Issues regarding Impairment of Assets

Module II

- 8. Consolidated Financial Statements of Group Companies
- Concept of a group, purposes of consolidated financial statements, consolidation procedures, consolidation with two or more subsidiaries, consolidation with foreign subsidiaries. consolidated profit and loss account, balance sheet and cash flow statement,

treatment of investment in associates in consolidated financial statements, treatment of investments in joint ventures in consolidated financial statements

- 10. Accounting for Corporate Restructuring
- 11. Accounting for Liquidation of Companies
- 12. Accounting and Reporting of Financial Instruments
- 13. Meaning, Recognition, De-recognition and Offset, Compound Financial Instruments, Measurement of Financial Instruments, Hedge Accounting, Disclosures.
- Financial Reporting by Mutual Funds, NBFCs, Merchant Bankers, Stock and Commodity Market Intermediaries
- 15. Emerging Issues in Financial Accounting and Reporting
- Value Added Statements, Business Responsibility Reporting, Sustainability Reporting Global Reporting Initiatives, Integrated Reporting etc.

Suggested Readings:

- Baker, Lembke and King, Advanced Financial Accounting, McGraw Hill,
- Banerjee & Basu, (ed.), *Corporate Financial Reporting*, DSA in Commerce, University of Calcutta
- Banerjee, B. Regulation of Corporate Accounting and Reporting in India, The World Press
- Basu, A K., *Rediscovering the Balance Sheet a corporate financial reporting perspective,* DSA in Commerce, University of Calcutta
- Bedford, N. M. Extensions in Accounting Disclosure, Prentice Hall
- Chakraborty, H;, Advanced Accountancy, Oxford University Press
- Lewis and Pendrill, Advanced Financial Accounting, Financial Times \ Prentice Hall
- Maheshwari, S.N., Advanced Accountancy, (Vol. II), Vikas Publishing House
- Shukla, Grewal kmd Gupta, Advanced Accounts (Volume-II) S. Chand & Co.

Paper DSE.306A: Security Analysis and Portfolio Management

Module I: Security Analysis

1. Understanding the world of Investments: Investing and investments – Nature of investments – Investment attributes – Comparison between investment, speculation and

gambling – Investment alternatives – Real assets vs. financial assets – Meaning, characteristics and types of financial assets – Derivative securities – Direct vs. indirect investments – Framework of investment policies and practices for institutions and individuals – Techniques of security analysis – Fundamental analysis vs. technical analysis

- Organization and functioning of financial markets: Overview of Financial System, Financial Market – Money Market - Capital Market - Primary market vs. secondary market — Stock market indices
- Fundamental analysis: Economic analysis Industry analysis Company analysis (including forecasting future performance) – Methods of equity valuation – Bond analysis and valuation
- Technical analysis: Charting techniques (trends, moving average, relative strength, point and figure analysis etc.) – Dow theory – Key technical indicators – Technical Analysis and Behavioral Finance.

Module II: Portfolio Management

- 5. Portfolio Analysis: Concept and estimation of risk and return of individual securities Relationship between risk and return – Types of security risk – Systematic risk vs. unsystematic risk – Concept of portfolio and portfolio diversification – Portfolio management process – Implications of diversification for investors – Diversification strategies – Portfolio risk and return – Markowitz risk-return optimization principle
- Portfolio Selection: Markowitz (mean-variance) efficient frontier and optimal portfolio Introduction of a risk free security in portfolio – Market portfolio – Capital market line (CML)
- Capital Market Theory and Evaluation of Investment Performance: Capital asset pricing model (CAPM) – Features and assumptions – Concept and estimation of Beta Coefficient – Significance of Beta in portfolio decisions – Single index market model for portfolio construction – Security market line (SML) – Criticisms of capital asset pricing model – Arbitrage pricing theory (APT) – Fama-French Multi Factor Model
- Evaluation of portfolio performance: Portfolio performance measures Portfolio revision Portfolio insurance Mechanics of international diversification

Suggested Readings:

- Chandra, P., Investment Analysis and Portfolio Management, Tata McGraw Hill.
- Elton, Gruber, Brown and Goetzmann, *Modern Portfolio Theory and Investment Analysis*, John Wiley & Sons.
- Fabozzi, F.J., Investment Management, Prentice Hall.
- Fischer and Jordan, Security Analysis and Portfolio Management, Prentice Hall.
- Jones, C.P., Investments Analysis and Management, John Wiley & Sons.
- Reilly and Brown, *Investment Analysis and Portfolio Management*, South Western Cengage Learning.
- Sharpe, Alexander and Bailey, *Investments*, Prentice Hall.

Discipline Specific Electives: Group B – Banking and Insurance

Paper DSE.305B: Regulatory Framework of Banking and Insurance Business 1. Module I

- Historical Development of Indian Banking System: Banking in India during preindependence era; Changes in Indian banking system post independence- establishment of RBI, bank nationalization in 1960s-liberation in 1990s and bank reforms; Laws governing banking in India-a brief outline; Present structure of Indian Banking System.
- 3. **RBI as a Banking Sector Regulator:** Objectives of RBI; Functions of RBI; Monetary Policy of RBI and Credit Control.
- 4. Banking Regulation Act and Other Legislations Regulating Commercial Banking in India: Banking Regulation Act 1949 – relevant provisions; Prevention of Money Laundering Act, 2002; Banking Cash Transaction Tax and Service Tax; The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002; Foreign Exchange Management Act 1999 etc.; The Banking Code Rules; consumer protection in banking.
- Regulation and Supervision of Micro-finance Institutions: Microfinance Institutions as an alternative to banking institutions in India, legal forms, regulatory framework-self regulation, state level legislations; Proposed Microfinance Institutions (Development and Regulation) Bill 2012.

Module II

- Introduction to Indian Insurance Sector: Concept of Insurance and its Evolution; Insurance Legislation in India - Insurance Act, 1938 - Nationalization of Insurance Business in India - Life and General Insurance Councils; Liberation in 1990s and insurance reforms.
- IRDA: Mission Statement- Composition Duties, Power and Functions Regulations Issued by the IRDA
- 8. Agency Function and Registration of Insurance Companies: Qualifications and Functions of Brokers, Agents and Corporate Agents, Validity and Renewal of License Applicable to Them; Regulations for Third Party Administrators (TPA) –Procedure for Obtaining a License Revocation and Cancellation of Licence Code of Conduct for TPA Maintaining Confidentiality by TPA; Procedure for Registration of Insurance Companies Renewal and Suspension of Registration Regulations for Registration of Life and General Reinsurance
- 9. Policyholders' Interest and Grievance Redressal: Rights of Assignment, Nomination and Transfer, Stages of Insurance Policy, Free Look Period, Matters to be Stated in a Life and General Insurance Policy Claim Procedures for Life and General Insurance Policies; Grievance Redressal Consumer Protection Act Feature and Structure Appeals and Penalties Ombudsman –Nature of complaints Pre Requisite for Filing Complaints, Integrated Grievance Management System (igms).

- Indian Institute of Banking & Finance (2008). Legal and Regulatory Aspects of Banking, Bucketbolt Commerce Pvt. Ltd, Mumbai
- Tannan, M.L & Mitra, M. (2014). Banking Law and Practice, Indian Law House, Delhi
- Sundaram, K.P.M & Varshaney, P.N. (2014). *Banking: Theory Law & Practice*, 3rd Edition. Sultan Chand & Sons.
- Indian Institute of Banking and Finance (2012). *Principles of Banking*, Macmillan.
- Mittal R.K., Saini A.K. & Dhingra Sanjay (2008) *Emerging Trends in the Banking Sector*, Macmillan 2008.
- George E. Rejda : Principles of Risk Management and Insurance, Addison Wesley

- Srinivasan N: Principles of Insurance Law, Wadhwa & Co.
- Taxmann, Insurance Manual, Taxmann Publication Private Limited
- IIBF, Microfinance Perspectives and Operations, Taxmann Publication Private Limited

Paper DSE.306B: Management of Banking and Insurance Products and Services

Module I: Management of Banking Products and Services

- Deposit products: Demand deposits current account and charges associated with it, savings account including BSBD account, methodology of interest calculation; Time deposits – term deposits with interest payout option, term deposit with interest accumulation option, interest calculation, calculation of maturity value; Recurring deposits – calculation of maturity amount; Other innovative deposit products- Savings with term deposit, Term deposits linked to savings or current account, annuity deposit, recurring deposit with variable installment, tax saving term deposits, PPF, deposit under capital gain scheme, NRI deposits etc.; Regulatory requirements associated with deposit products (KYC, PMLA etc).
- 2. Loan products: Personal Finance Housing loan, vehicle loan, education loan, personal loan, gold loan, loan against securities, loan against other property calculation of EMI, impact of processing charge, prepayment and associated conditions; Business Finance cash credit, term loan-mortgage and non-mortgage loans, overdraft facilities; Fixed vs. Floating rate loans; Determination of lending rates by banks PLR, Base Rate, RBI Repo and Reverse Repo rate change and its impact on lending rate, marginal cost of fund; Loan approval process.
- 3. Other products and services: Certificate of deposits; Fund based services other than loan – bill purchase/discount, lease finance, hire purchase finance; Non fund based services – letter of credit, letter of comfort, bank guarantee/LOU, LC advising/ confirmation, co-acceptance of bills, solvency certificate, credit report, services as executors and trustees, safe deposit vaults; payment and settlement/ remittance services – cheque, pay order and demand draft, ATM and debit cards, RTGS, NEFT, ECS, fund transfer to foreign countries, prepaid cards and wallet services, standing instructions; Credit cards.

4. Emerging areas in banking: New channels of banking - online banking, mobile banking, APP banking; Bancassurance; Differentiated banking license – payment banks and small finance banks; MUDRA bank; Cross-selling; Islamic Banking.

Module II: Management of Insurance Products or Services

- 5. Life Insurance Products for Individuals: Term Plan, Endowment Plan, Money Back Insurance Plan – Whole-Life Insurance Plan – Unit Linked Insurance Plans (ULIPs) – Joint Life Insurance Plans – Child Insurance Plans – Rider benefits – Industrial life insurance – MWP Policies – Keyman insurance; Annuity Plans – different types of annuity plans – annuity vs. life insurance; Formalities associated with life insurance – application and acceptance, policy document, premium payment, bonus, policy lapse and revival, surrender.
- Group Insurance Schemes: Different types of group insurance schemes Group Term Insurance Scheme – Group Gratuity Scheme – Group Superannuation scheme – Types of group superannuation schemes – Group Leave Encashment scheme – Employees Deposit – Linked insurance Scheme – Group Insurance Scheme in-lieu of EDLI – Social Security Scheme.
- 7. General Insurance Products: Personal and group health insurance; Fire and Consequential Loss Insurance; Marine Insurance; Agricultural Insurance; Liability Insurance; Motor Liability, Personal Accident and Specialty Insurance; Engineering Insurance; Other insurances Burglary insurance Baggage insurance Fidelity Guarantee insurance Jeweller's Block insurance Crime insurance Aviation insurance Satellite insurance -Oil & energy risks insurance etc. micro insurance; Procedural aspect of general insurance products (brief outline).
- 8. Innovative Insurance Products and IRDA Regulation Regarding Product Management: Micro Insurance Products, Postal Insurance, e-Insurance Product – Management of these Insurance products with Reference to the Relevant Regulations Issued by IRDA

Suggested Readings:

• IIBF, Digital Banking, Taxmann Publication Private Limited

- IIBF, Basics of Banking, Taxmann Publication Private Limited
- IIBF, Banking Products and Services, Taxmann Publication Private Limited
- IIBF, Credit Cards, Taxmann Publication Private Limited
- IIBF, Insurance Products and Services, Taxmann Publication Private Limited
- Gregg D W & Lucas V B, Life and health insurance handbook, R.D Irwin
- Magee and Bicklhaupt, General Insurance, R.D Irwin
- Tripathy M N, Insurance- Theory and Practice, PHI
- Mishra K, Fundamentals of Life Insurance Theory and Applications, PHI
- National Insurance Academy, General Insurance Principles and Practice, Cengage Learning

Discipline Specific Electives: Group C – Marketing Management

Paper DSE.305C: Integrated Marketing Communication

Module I

- Integrated Marketing Communication; Concept; Promotion Mix; Advertising Goals; Types of Advertising.
- Role of Advertising in Creating Brand Awareness; Brand Attitude, Brand Image; Brand Personality and Brand Equity; Advertising Appeals.
- Message Design; Print Copy and Broadcast Copy; Selecting Appropriate Media; Traditional and Non-Traditional Media; Media choices in Rural Markets

Module II

- 4. Media Planning and Scheduling; Emerging Media Vehicles.
- 5. Advertising Budget; Approaches; Measurement of Advertising Effectiveness.
- Advertising Agency; Role and Responsibility; Client-Agency Relationship; Compensation.
- 7. Consumer Sales Promotion, Trade Sales Promotion.

Suggested Reading:

- Belch and Belch, *Advertising and Promotion: An Integrated Marketing Communication Perspective*, McGraw Hill
- Rossiter and Percy, Advertisisng Communication and Promotion Management, McGraw Hill
- Arens, Contemporary Advertising, McGraw Hill
- Shah and D'Souza, Advertising and Promotion, An IMC Approach, McGraw Hill
- Jethwaney and Jain, Advertising Management, Oxford University Press.

Paper DSE.306C: Sales and Distribution Management

Module I

- 1. Introduction, Evolution, Setting Sales Objectives
- 2. Sales Organisation; Benefits, Types.
- 3. Personal Selling Process.
- 4. Sales Forecasting; Methods
- 5. Sales Territory; Designing territory.

Module II

- 6. Sales Quota; Approaches and Allocation
- 7. Sales Budget
- 8. Sales Force Management; Recruitment and Selection; Sales Force Compensation; Evaluation of Sales Force Performance.
- 9. Sales Audit.
- 10. Large Format Retailing; Building Retail Brand.

Suggested Readings:

- Stanton and Spiro, Management of Sales Force, McGraw Hill
- Still, Cundiff and Govoni, Sales Management, Prentice Hall India.
- Panda and Sachdev, Sales and Distribution Management, Oxford.
- Berman, Barry and Evans, Retail Management, Prentice Hall

Discipline Specific Electives: Group D – Taxation Paper DSE.305D: Corporate and International Taxation

Module: I

- 1. Capital Gains
- 2. Set off, carry forward of losses and taxability in relation to certain special cases

3. Special provisions with regard to: change in the rate of currency, presumptive taxation, dividend stripping, bonus stripping

Module: II

- 4. Assessment and computation of tax of a company(including MAT)
- 5. Taxation of Business Trust and Start-ups
- 6. International Taxation

Suggested Readings:

- Singhania, V. K., *Direct Taxes*, Taxmann.
- Ahuja & Gupta, Direct Taxes: Law & Practice, Bharat
- Bare Act, Income Tax Act (as amended), Taxmann.
- *Income Tax Rules*, Taxmann.

Paper DSE.306D: Direct Tax Procedure

Module I

- 1. Submission of Return of Income and Assessment Procedure
- 2. Advance Tax, Interest and Fees
- 3. Income Tax authorities and Advance Rulings

Module II

- 4. TDS, TCS and Refund
- 5. Penalties and Prosecutions
- 6. Appeals and Revisions, Settlement of cases

- Singhania, V. K., Direct Taxes, Taxmann.
- Ahuja & Gupta, Direct Taxes: Law & Practice, Bharat
- Bare Act, *Income Tax Act* (as amended), Taxmann.
- *Income Tax Rules*, Taxmann.

Discipline Specific Electives: Group E – E Commerce

Paper DSE.305E: Business Models in E-Commerce and ICT Applications

Module I

- Introduction: E-Commerce Concepts, Features; E-commerce vs. E-enterprise; E-commerce vs. E-tailing; Present scenario and regulatory environment of E-commerce in India; Business Models – concepts, types of business models; key elements of a business model.
- Types of E-commerce: Business to Business (B2B) characteristics, importance, process, alternative models of B2B; Business to Consumer (B2C) characteristics, process; marketing and business strategies in B2C and B2B E-commerce, role of websites in B2C; Consumer to Consumer (C2C) characteristics, process; Consumer to Business (C2B) characteristics, process; Other E-commerce Models Business to Government (B2G), Government to Business (G2B) and Government to Consumer (G2C).
- 3. **E-commerce Business Models:** E-business Models based on the relationship of transaction parties; E-commerce process; primary revenue Models in E-commerce, E-tailing business models case studies; business models in emerging E-commerce areas.

Module II

- 4. **Introduction to ICT:** Evolution of computers, features and design of its components, operating systems proprietary and open source, application software, computer languages and programming (basic idea); ICT concept and importance, components.
- ICT Applications in Various Fields: E-Governance G2G, G2B, and G2C models, benefits of E Governance, risk involved; E-environment – Geographical information System (GIS), weather forecasting; E-education – computer aided learning; E-health; ICT in manufacturing- CAD and CAM.
- 6. **ICT and E-commerce:** Role of ICT in driving E-commerce business, ICT and E-commerce relationship, ICT Infrastructure and E-commerce.

- Pandey, Srivastava and Shukla, E-Commerce and its Application, S. Chand
- Joseph P T, *Electronic Commerce An Indian Perspective*, P.H.I
- Turban, King, Viehland& Lee, *Electronic Commerce- A Managerial Perspective*, Pearson.
- Chaffey, *E-Business and E-Commerce Management: Strategy, Implementation and Practice, 5e*, Pearson India
- Bhanver J, *Click!: The Amazing Story of India's E-commerce Boom and Where it's Headed Hardcover*, Hachette

• Whiteley D, E - Commerce: Strategy, Technologies and Applications, McGraw Hill

Paper DSE.306E: Logistic and Supply Chain Management in E –Commerce

Module I: Logistics in E-Commerce

- Introduction to E-commerce Logistics: Logistics in E-commerce concept, features, importance, evolution of E-commerce logistics, E-commerce logistics in development markets, Indian scenario.
- E-logistics: ICT infrastructure for future logistics, E-logistics for various modes of transport (air, road, rail etc.), automating E-logistics in B2C and B2B E-commerce, E fulfillment, Global logistics trends, Global issues and challenges in Logistics Management.
- 3. Warehouse and E-logistics: Concept of inventory management; Warehouse Management System (WMS) - Functions, Connectivity of WMS solution into ERP, Warehousing challenges of e-commerce; Radio Frequency Identification (RFID) - Cost and benefits, RFID to enhance data capture processes in warehouse environment; GS1 keys used in logistics and Eprocurement, The Global Data Synchronization Network (GDSN), Electronic Product Code Information System (EPCIS).

Module II: Supply Chain Management in E-commerce

- Introduction to Supply Chain Management: Concept of supply chain and supply chain management, importance of SCM, evolution of SCM, SCM vs. Value Chain Management.
- E-Supply Chain Management: Application of ICT in SCM; E-Supply Chain planning (Components); E-Supply chain fusion; Channel Management and Channel Integration; New trends in SCM – application of Artificial Intelligence.
- Global Supply Chain Management: Impact of Globalization on Logistics and Supply Chain Management; Managing Global Supply Chain; Single Window System for Global SCM.

- Chopra and Kalra, *Supply Chain Management*, Pearson
- Christopher M, Logistics and Supply Chain Management, FT Publishing International

- Wang and Pettit, *E-Logistics: Managing Your Digital Supply Chains for Competitive Advantage*, Kogan Page
- Graham, Manikas and Folinas, *E-Logistics and E-Supply Chain Management: Applications for Evolving Business*, IGI Global
- Blokdyk, Global Supply Chain Management: A Complete Guide, Createspace Independent Publishing Platform

Fourth Semester

Paper CC.401: Strategic Management

Module I

- Introducing Strategy: Meaning and Significance of Strategy; Characteristics of Strategic Decisions; Consequences of Characteristics of Strategic Decisions; Levels of Strategy; Strategic Management Process.
- Strategy Analysis External Analysis: The Macro-Environment, Industries and Sectors; Sources of Competition–Porter's Five Forces framework, Strategic Groups, Organizational Fields.
- Strategy Analysis Internal Analysis: Critical Success Factors, The Strategic Importance of Resources, Competences and Core Competences, Value Chain, Building Blocks of Competitive Advantage, Durability of Competitive Advantage, Avoiding Failures and Sustaining Competitive Advantage, The Role of Luck, Robustness, Benchmarking
- 4. Business Level Strategy and Functional Strategy: Competitive Positioning and Business Level Strategy, Generic Business Level Strategy, Competitive Positioning for Superior Performance, Tactics for Business Strategies, Strategic Choice, Functional Strategy– achieving superior Efficiency, Quality, Innovation and Customer Responsiveness

Module II

5. Strategic Leadership: Significance of Strategic Leadership; Level-5 Leadership Pyramid (Jim Collins); Strategy as Planned Emergence—Strategy Development Routes; the Role of Vision, Mission and Values in Managing the Strategy Process—Productoriented versus Customer-oriented Vision Statements; Strategic Innovation—the Innovation Process, Types of Innovation, Innovation and Industry Life-cycle; Strategic and Social Entrepreneurship.

- 6. Corporate Level Strategy: Concept of Corporate Parent; Corporate Rationale; Horizontal Integration, Vertical Integration; The Extent of Corporate Diversity–Types of Diversification; Strategic Outsourcing, Stability Strategies, Retrenchment Strategies, Combination Strategies, Corporate Restructuring; Competing around the World—the Integration-Responsiveness Framework and Strategic Positioning under Globalization.
- 7. **Strategy Implementation:** Nature of Strategy Implementation and its Interrelationship with Strategy Formulation; Barriers to Strategy Implementation; Implementing Strategy through Organisational Design--Organisational Structure, Organisational Culture, and Organisational Change Matching Strategy and Structure; Strategy-Culture Relationship.
- 8. Strategic Evaluation and Control: Nature of Strategic Evaluation and Control— Strategic Control versus Operational Control; Strategic Evaluation–Importance, Participants, Barriers and Requirements; Techniques of Strategic Evaluation and Control; The Shared Value Creation Framework—The Relationship between Strategy and Business Ethics.

Suggested Readings:

- Hill, C.W.L and G.R. Jones, *Strategic Management- An Integrated Approach*. Cengage Learning
- Johnson, G. and K. Scholes, *Exploring Corporate Strategy: Text and Cases*. Pearson Prentice Hall
- Kazmi, A., Strategic Management and Business Policy. McGraw Hill Education
- Rothaermel, F.T. *Strategic Management*. McGraw Hill International Education (2nd edition).
- Thompson Jr., A.A., M.A. Peteraf, J.E. Gamble, A.J. Strickland III and A.K. Jain, *Crafting* and Executing Strategy- The Quest for Competitive Advantage-Text and Cases. McGraw Hill Education

Paper CC.402: Strategic Cost and Management Accounting Module I

- 1. **Introduction:** Role of Strategic Cost and Management Accounting in a Globalized Competitive Environment, Cost Management as one of the Critical Success Factors of the Firm, Nexus between Strategic Management and Strategic Cost Management, Value Chain Approach for Cost Management.
- 2. Tools of Strategic Cost Management:
- 3. Activity Based Costing System and Activity Based Cost Management.
- 4. Target Costing, Life Cycle Costing, Quality Costing, JIT.
- Performance Measurement: Return on Investment, Residual Income, Different Value Added Concepts like Economic Value Added, Market Value Added, Cash Value Added etc., and Balanced Scorecard.
- 6. Transfer Pricing: Need, Principles, Different Methods and their Applicability.
- 7. Responsibility Accounting and Reporting

Module –II

- **8.** Cost Analysis for Decision Making: Introduction—relevant costing— relevant cost and non-relevant cost —opportunity cost— sunk cost—differential cost and incremental cost.
- **9. Marginal Costing and Strategic Management Decisions:** Introduction— marginal cost and strategic management decisions —consideration of limiting factor in decision making— make or buy, adding or dropping a product line, shutdown or continue, special order/ export order, product-mix, pricing decisions.
- **10. Management Control Systems:**
 - (i) Budgetary Control System: Introduction—budgetary control as managerial tool budget manual—preparation of different types of budgets— fixed and flexible budget—functional budget— master budget—zero based budgeting—performance budgeting
 - (ii) Standard Costing and Variance Analysis: Introduction— the process of standard costing— overhead variances: variable and fixed variances — sales variances: sales value and margin variances—reporting of variances: reconciliation of budgeted profit and actual profit—investigation of variances.
 - (iii) Cost Management Technique: Introduction—cost control and cost reduction, benchmarking, value chain analysis and value engineering/value analysis.

Suggested Readings:

- Basu.Banerjee and Dandapat (Edrs), Strategic Cost Management, University of Calcutta
- Lal, Jawahar, *Advanced Management Accounting, Text, Problems and Cases*, S.Chand & Co., New Delhi.
- Banerjee, B, Cost Accounting, PHI, New Delhi.
- Bhattacharya, Ashis, Cost Accounting, PHI, New Delhi.
- Saxena and Vashist, Cost and Management Accounting, Sultan Chand and Sons, New Delhi.
- Khan, M.Y.& Jain, P.K., Management Accounting, McGraw Hill Education.
- Atkinson Anthony A., Rajiv D. Banker, Robert Kaplan and S. Mark Young, *Management Accounting*, Prentice Hall.
- Horngreen Charles T., and Gary L. Sundem and William O. Stratton, *Introduction to* Management Accounting, Prentice Hall of India.
- Drury, Colin, Management and Cost Accounting, Thomson Learning.
- Garison, R.H. and E.W. Noreen, *Managerial Accounting*, McGraw Hill Education.
- Ronald W. Hilton, *Managerial Accounting*, McGraw Hill Education.

Paper CC.403: Auditing and Assurance Services

Module – I

- Concept of Audit and Audit Evidences: Introduction to Auditing, Philosophy of Audit, Extended Meaning of Audit, Auditing as a Social Science, Social Object of Audit, Audit Evidences--Introduction, Sources, Relevance and Reliability, Sufficiency and Appropriateness, Methods of Obtaining Audit Evidences.
- Standards on Auditing: Background, Definition, Scope, Objectives and Significance, Procedure of Issuing Standards, Structure of the Standards Issued by the AASB, Role of IAASB
- Auditor's Report and Auditor's Independence: Essential of Good Report, Elements of Auditor's Report, Types of Auditor's Reports -- Unqualified Report and Modified Report--Qualified Report, Adverse Report, Disclaimer of Opinion—Audit Reports and Certificates for Special Purposes, Auditor's Report under the Companies Act, 2013, the

Companies (Auditor's Report) Order, 2016 (CARO), Auditor's Independence---Meaning and Different Issues.

4. Internal Control System and Risk Assessment: Elements of Internal Control System ---- Internal Check and Internal Audit, Evaluation of Internal Control System---Narrative Record, Internal Control Checklist, Internal Control Questionnaire, Tests of Internal Control, Relationship between Internal Auditor and Statutory Auditor, Professional Scepticism, Concept of Audit Risk-Application of Concept of Materiality- Relationship between Audit Risk and Materiality.

Module – II

- 5. Special Audit: (a) Cost Audit---Objectives, Benefits, Qualification, Disqualification and Appointment of Cost Auditor; (b) Management Audit--- Objectives, Benefits , Appointment of Management Auditor; (c) Green (Environmental) Audit: ---Concept, Objectives, Current Practice in India; (d) Secretarial Audit---Objectives, Benefits, Qualification and Appointment of Secretarial Auditor, Secretarial Standards (SSs) under the Companies Act, 2013--- a Brief Outline of SSs Issued by the ICSI, Scope and Functions of the Secretarial Standards Board.
- 6. Professional Ethics and Professional Misconduct: Professional Ethics of Chartered Accountants, Fundamental Principles of Professional Accountants, Professional Misconduct and Negligence, Schedules of the Chartered Accountants Act, 1949 relating to Professional Misconduct, Enquiry into Charges of Misconduct of the Chartered Accountants.
- Audit in Computerized Environment: Objectives and Scope of Audit in CIS (Computerized Information System) Environment, Approaches to Electronic Data Processing (EDP) Auditing---Auditing Around the Computer, Auditing Through the Computer, Audit Trail, Computer Assisted Audit Techniques (CAATs).
- Government Audit: Concept of Government Audit, Comptroller and Auditor General(C&AG) --- Duties and Powers, Expenditure Audit and Audit of Receipts, Constitutional Role of C&AG, Audit of Local Bodies and Not-for-Profit Organizations---Objectives, Audit Programme.

Note: All topics to be covered with reference to:

- (a) Companies Act as amended to date
- (b) Standards on Auditing as pronounced by the ICAI
- (c) Case Studies / Legal Case Decisions , if applicable

Suggested Readings:

- Basu, B.K, An Insight into Auditing A Multidimensional approach, Basushree Book Stall.
- Basu, S.K, *Auditing and Assurance*, Pearson Education, 2nd edition, 2015.
- Emile Woolf, Auditing Today, Prentice Hall India.
- Gupta, K, Contemporary Auditing, Tata McGraw Hill.
- Garge, Pankaj, Auditing and Assurance, Taxmann Publications Pvt. Ltd, 3rd edition, 2015.
- ICAI, Standards on Auditing and Guidance Notes.
- ICSI, Secretarial Standards.
- Saha, S.S, Statutory Auditors' Ethical Role, Scholar's Press, Germany, 2015
- Saha, S.S, *Statutory Auditors' Objectivity in Corporate Accounting Scandals*, Lambert Academic Publishing, Germany, 2015.
- Tandon, B.N, *Auditing Practice*, Sultan Chand, New Delhi.
- Victor Z. Brink and Herbert Witt, Modern Internal Auditing, JohnWiley & Sons.

Paper GE.404: Business Research Methods

Module I

- **1. Introduction:** Meaning and Objective of business research; Types of research; Importance of research in business decision making; Ethics in business research.
- **2. Research Problem Formulation:** Broad problem area; Problem definition; Literature survey; Identification of research gap; Problem formulation; Hypothesis formulation; Drafting research proposal.
- **3. Research Design:** Types of research; Descriptive research, Causal research and Exploratory research; Experimental design; Qualitative and quantitative research; Cross-sectional and longitudinal research.
- **4.** Scaling Techniques and Questionnaire Design: Types of scale; Rating scales; Ranking scales; Scales for stimuli; Scales for respondents; Scales for both stimuli and respondents; Reliability and Validity Test; Questionnaire construction.
- **5.** Sampling Design and Data Collection: Selection of random sample; Review of sampling techniques; Sampling distributions (statement only); Sample size decisions; Field work.
- **6.** Data Preparation and Presentation: Coding, editing and data entry; Tabulation of data; Diagrammatic representation of data.

Module II

- 7. Univariate Data Analysis: Review of descriptive statistics; Review of inferential statistics (Parametric & Non-parametric); Analysis of variance.
- 8. Multivariate Data Analysis: Multiple regression analysis; Multiple and partial correlations; Problems in regression; Logistic regression (Logit and Probit model); Analysis of covariance; Characteristics of panel data; Panel data regression; Principal component analysis; Cluster analysis; Discriminant analysis; Factor analysis; Conjoint Analysis; Structural equation modeling; Data envelopment analysis.
- **9.** Time Series Analysis: Time series components; Box-Jenkins methodology; Evaluation of forecast accuracy; Unit root tests; Granger Causality, Co-integration and error correction mechanism; Volatility modeling; GARCH models (basic idea only).
- **10. Report Preparation and Presentation:** Characteristic of a well-written research report; Report presentation

- Das, J. K., Statistics for Business Decisions, Academic Publishers
- Das, N. G. and Das, J. K., Business Mathematics and Statistics, Tata McGraw Hill
- Aczel, A. D. and Sounderpandian, J., Complete Business Statistics, Tata McGraw Hill
- Bryson, Alan, Business Research Methods; OUP
- Zikmund and Adhikari, Business Research Methods, Cengage
- Murthy, S. N and Bhhojanna, U., Business Research Methods, Excel Books
- Sekaran, Uma, Research Methods for Business: A Skill-building Approach; Wiley.
- Beri, G. C., Marketing Research, Tata McGraw Hill.
- Kothari, C. R., Research Methodology, New Age International Ltd.
- Johnson, R. A. and Wichern, D. W., *Applied Multivariate Statiatical Analysis*, Prentice-Hall of India
- Makridakis, S., Wheelwright, S. C. and Hyndman, R.J., *Forecasting Methods and Applications,* John Wiley and Sons
- Maddala, G. S. and Lahiri, K., Introduction to Econometrics, John Wiley and Sons
- Nargundkar, R. Marketing Research Text And Cases, Mcgraw Hill

- Shenoy, G. V. and Pant, M., *Statistical methods in Business and Social Science*, McMillan
- Gujarati, D. N. and Sangeetha, Basic Econometrics, Mc Graw Hill
- Tsay, R. S., Analysis of Financial Time Series, John Wiley and Sons
- Ruppert, D., Statistics and Finance: An Introduction, Springer
- Alexander, C., Market Models A Guide to Financial Data Analysis, John Wiley
- Enders, W., Applied Econometric Time Series, John Wiley

Discipline Specific Electives: Group A – Accounting and Finance

Paper DSE.405A: Financial Analysis

Module – I

- Introduction: Meaning and objective of financial analysis Origin of financial analysis

 Demand for and supply of financial statement information Sources of financial information Traditional versus New approach to financial analysis
- Tools and Techniques of Financial Statement Analysis: Horizontal or trend analysis Vertical analysis or common size statements – Use of accounting ratios and other statistical measures for analysis – Inter-firm and intra-firm comparisons – Benchmark for comparison – Sensitivity Analysis – Prospective Analysis
- Profitability and Cash Flow Analysis: Application of accounting ratios for measuring profitability – Concept of economic value added – Importance of analysis of cash flow statement – Interpretation of cash flow statement
- Liquidity and Solvency Analysis: Measurement of Liquidity and Solvency by application of ratios – Liquidity and distribution of current assets – Capital structure analysis

Module – II

5. Capital Market Efficiency and its Implications for Financial Analysis: Random walk and efficient capital market – Nature and forms of efficient capital market – Efficient capital market anomalies – Implications of capital market efficiency – Role of financial analyst in efficient capital market

- **6. Distress Analysis:** Meaning of financial distress and corporate failure Causes and symptoms of failure Models for prediction of corporate failure
- Analysis of Business Combinations: Meaning and Types of business combinations Reasons for combinations – Determination of Exchange Ratio – Evaluation of post combination performance
- Credit and Equity Risk Analysis: Types of credit and equity risks Concept of credit rating – Models for prediction of bond rating and bond risk premium – Techniques and Process of equity risk analysis using financial information

Suggested Readings:

- Bernstein and Wild, *Financial Statement Analysis: Theory, Application and Interpretation,* McGraw Hill.
- Foster, G., Financial Statement Analysis, Pearson Education.
- Gibson, C. H., Financial Statement Analysis, Cengage Learning.
- Lev, B., Financial Statement Analysis: A New Approach, Prentice Hall.
- Penman, S. H., Financial Statement Analysis and Security Valuation, McGraw Hill.
- Sinha, G., Financial Statement Analysis, Prentice Hall of India.
- Subramanyam and Wild, Financial Statement Analysis, McGraw Hill.
- White, Sondhi and Fried, The Analysis and Use of Financial Statements, John Wiley & Sons.

Paper DSE.406A: International Finance

Module I

- 1. Forex Market Transactions: Exchange Rate Quotations, Exchange Rate Exposure, Exchange Rate Volatility, Volatility Clustering, Transaction Exchange Risk, Forward Contracts, Arbitrage and Trading.
- International Parity Conditions: Interest Rate Parity, Hedging Transaction Risk in the Money Market, Unbiasedness Hypothesis, Fischer Effect, International Fischer Effect, Purchasing Power Parity and Real Exchange Rates, MacPPP Standard.

- 3. **Currency Futures:** Contract Features and Price Quotes, Basis, Hedging, Optimal Hedge Ratio, Speculation and Arbitrage.
- 4. Currency Options: Contract Features and Price Quotes, Risk Management.
- 5. **Currency Swaps:** Features, Market Quotations, Borrowing advantages, Counter-Party Risk, Swaps as a series of Forward Contracts, Hedging.

Module – II

- International Financing: Corporate Sources and Uses of Funds Equity Financing (ADR and GDR) - International Financial Markets - Development Banks –Project Finance - The Euro Markets
- Foreign Investment and Working Capital Management: International Portfolio Investment, International Capital Budgeting – Country Risk, Financing Foreign Trade – Management and Financing of Current Assets
- 8. International Transfer Pricing: Objectives Arm's Length Price-Advance Pricing Agreement-Safe Harbour -Techniques of International Transfer Pricing – Indian Perspective
- International Taxation: Tax Equity and Tax Neutrality –Tax Havens Double Taxation –Relief from Double Taxation – Tax Treaties – Treaty Shopping – Base Erosion Profit Sharing - Double Taxation Avoidance Agreement- Models of DTAA
- 10. **Recent Developments:** International Indebtedness Capital Account Convertibility Innovations in International Financial Instruments.

- Shapiro, A.C., Multinational Financial Management, Wiley.
- Bekaert, G. & Hodrick, R.J., International Financial Management, PHI.
- Jain, P.K., Peyrard, J. & Yadav, S.S., International Financial Management, Trinity Press.
- Srivastava, R., *Derivatives and Risk Management*, Oxford University Press. Siddaiah, T, *International Financial Management*, Pearson
- Eiteman, D., Stonehill, A. I. and Moffet, M. H., Multinational Business Finance, Pearson
- Click, R.W. & Coval, J.D., *The Theory and Practice of International Financial Management*, PHI.

• Jarrow, R.A. & Chatterjea, A., *Derivative Securities, Financial Markets & Risk Management*, Viva Books.

Discipline Specific Electives: Group B – Banking and Insurance Paper DSE.405B: Fund Management in Banking and Insurance Companies Module I

- Introduction to treasury operations in banks: Concept and evolution; objectives and role of treasury; functions of treasurer; scope and functions of treasury management; organization structure of treasury; integrated treasury; internal treasury control system; RBI measures relating to treasury operations in banks; role of information technology in treasury management.
- 2. Liquidity management, restrictions on investment and forex market operations: Maintenance of CRR and SLR- concept, regulatory guidelines, penalty for non maintenance, cost of fund; CCIL – netting or elimination of exposure; restrictions on SLR and Non-SLR investments – Prudential Norms by RBI; Investment accounting (outline only); Forex market operation – international financial system and forex market, instruments traded, exchange rate system, Indian forex market and RBI; Forex valuation – FEDAI guidelines.
- 3. **NPA Management:** Concept, classification, guidelines to recognition of NPA; provisioning requirement; NPA accounting, SARFAESI Act and Insolvency and Bankruptcy Code (brief idea).
- 4. Capital Adequacy and BASEL Norms: meaning of capital fund, sources, importance of capital fund in risk management, capital adequacy standards BASEL framework (its evolution and present form), present state of capital adequacy standards in India.
- **5. Measurement of Financial Performance of Banks:** Financial statements prepared by banks (brief outline); analysis and interpretation of key financial performance indicators.

Module II

- Investment Management in Insurance Institutions: Possible avenues of investments, Provisions of IRDA (Investment) Regulations 2016.
- Asset- Liability Management and Solvency: Concept of solvency and solvency margin, need for solvency margin, maintenance of solvency margin by insurance companies –

IRDA (Asset- Liability Management and Solvency Margin of Insurers) Regulation 2000; International practices, need for a Risk Based Capital approach in India.

- 8. **Measurement of Financial Performance of Insurance Companies:** Financial statements prepared by insurance companies (brief outline), Key performance indicators.
- Disclosure Norms for Insurance Companies: Introduction, Objectives of Disclosures, Norms of Disclosure, Disclosure Forming Part of Financial Statements (Life Insurer) Part II, Disclosure for Non-life Insurance Companies

Suggested Readings:

- IIBF, Treasury Management, McMillan
- IIBF, Treasury, Investment and Risk Management, Taxmann Publication Private Limited
- IIBF, Bank Financial Management, McMillan
- IIBF, Advance Bank Management, McMillan
- IIBF, Credit Management in Banks, McMillan
- Zad N S, Financial, Treasury and Forex Management, Taxmann Publication Private Limited
- Consoquest & Gehin, Asset Liability Management for Banks and Insurance Companies, Wiley
- Pathak and Ghosal, Asset Liability Management in Banks, ICFAI University Press

Paper DSE.406B: Risk Management – Tools and Applications Module – I

- Introduction: Concept of 'Risk' Difference between 'Risk' and 'Uncertainty' Types of Risk – Market Risk, Credit Risk, Liquidity Risk, Interest Rate Risk, Operational Risk, Off Balance Sheet Risk, Foreign Exchange Risk, Sovereign Risk, Insolvency Risk – Concept of Enterprise Risk Management (ERM) – Definition of 'Risk Management' – Approaches to Risk Management – Risk Management Strategies
- Interest Rate Risk Management: Analysis of Interest Rate Risk Concepts of Term Structure of Interest Rates and Yield Curve – Inseparability of Interest Rate Risk and Credit Risk – Interest Rate Risk Safety Zone – Measuring Interest Rate Risk – Gap Analysis, Asset – Liability Repricing and Repricing Risk, Duration and Convexity, Simulation Models – Interest Rate Risk Measurement and Basel Norms – Managing

Interest Rate Risk – Interest Rate Immunization, Yield Curve Smoothing, Interest Rate Derivatives

- 3. Market Risk and its Management: Market Risk and its Types Calculating Market Risk Exposures Market Risk and Basel Norms Value-at-Risk (VaR) methodology Factors affecting VaR Statistical Issues in VaR computation Sources of Foreign Exchange Risk Exposure Foreign Asset and Liability Positions Interaction of Interest Rate, Inflation and Exchange Rates Hedging Market Risk Dynamic Hedging Strategies
- 4. Managing Sovereign and Insolvency Risks: Sovereign Risk Events Debt Repudiation versus Debt Rescheduling Evaluation of Sovereign Risk Mechanisms for dealing with Sovereign Risk Exposures Debt for Equity Swaps, Bond for Loan Swaps, Multi Year Restructuring Agreement, Loan Sales Insolvency Risk Analysis through Capital Adequacy Ratios in Banking and Insurance Services
- Risk Analysis in Insurance Services: Insurability of Risks Nature of Insurance and Reinsurance Risks – Law of Large Numbers and Actuarial Methods of Insurance Pricing – Mitigating Risks in Insurance Services

Module II

- 6. Credit Risk Management : Credit Risk Exposures Types of Credit Risk Credit Events Credit Quality Problems and Credit Rating Transition Matrix Credit Risk Measurement Models Merton's Model Credit Risk Measurement and Basel Norms Managing Credit Risk Credit Derivatives and Securitization
- 7. Liquidity Risk Management: Liability-side and Asset-side Liquidity Risk Types of Liquidity Risk Events Inter -linkage between Liquidity Risk and Credit Risk Liquidity Risk in Insurance Services Measuring Liquidity Risk Jarrow-Merton Put Option Model Managing Liquidity Risk Choice of Liability Structure and Arrangement of Line of Credit
- Asset Liability Management: Concept, Role of ALM in managing interest rate risk and liquidity risk, RBI guidelines.
- 9. Managing Operational and Off Balance Sheet Risks: Off Balance Sheet Risk Exposures Loan Commitments, Commercial Letters of Credit and Letters of

Undertaking, Derivatives, Bank Guarantees and Deposit Insurance – Nature of Off Balance Sheet Risks – Sources of Operational Risk – Measurement of Operational Risk – Operational Risk and Basel Norms – Mitigating Operational Risk

Suggested Readings:

- Hopkin, P., Fundamentals of Risk Management, Kogan Page.
- Hull, J. C., Risk Management and Financial Institutions, Wiley.
- Indian Institute of Banking and Finance, Risk Management, Macmillan.
- Jorion, P., Financial Risk Manager Handbook, GARP, Wiley Finance.
- Rejda, G., Principles of Risk Management and Insurance, Pearson Education India.
- Saunders, A. and Cornett, M. M., *Financial Institutions Management*, McGraw Hill International.
- Van Deventer, D., Imai, K. and Mesler, M., *Advanced Financial Risk Management*, John Wiley and Sons.

Discipline Specific Electives: Group C – Marketing Management

Paper DSE.405C: Consumer Behaviour and Marketing Research

Module I

- 1. Consumer Behaviour; Concept; Importance; Stimulus Response Model.
- 2. Opinion Leadership; Innovation; Diffusion and Adoption.
- 3. Buying Decision Process; Role of Involvement; Consumer Behaviour Models.
- 4. Organisational Buying Behaviour; Family Buying Behaviour.

Module II

- 5. Marketing Research; Importance; Purpose and Scope
- 6. Qualitative vs. Quantitative research
- 7. Sources of Information; Marketing Information System
- 8. Marketing Research Techniques; Application in Marketing.

Suggested Readings:

• Loudon, Della and Bitta, Consumer Behavior, Concepts and Application, McGraw Hill.

- Bennett and Kassarjian, Consumer Behaviour, Prentice Hall.
- Schiffman and Kanuk, Consumer Behavior, Prentice Hall.
- Engel, Blackwell and Miniard, Consumer Behavior, Dryden Press.
- Nargundkar, Marketing Research, Text and Cases, McGraw Hill
- Majumdar, R., *Marketing Research : Text, Applications and Case Studies*, New Age International Ltd
- Beri, G C., Marketing Research, Tata McGraw Hill
- Malhotra, N., Marketing Research: An applied Orientation, Pearson Education
- Green, Tull and Albaum, Research for Marketing Decisions, PrenticeHall of India

Paper DSE.406C: Product Management and Marketing of Services

Module I

- 1. Product types and classification; Product Line and Mix Decisions.
- 2. Brand Building Process; Branding Techniques and Decisions.
- 3. Brand positioning and re-launch.
- 4. Strategies for Leader, Follower, Challenger and Nicher

Module II

- 5. Growth of Service Industry; Importance; Service as Independent Product and Product Support; Types; Characteristics of a Service
- 6. Service Marketing Mix; Differentiation; Service Marketing Triangle
- 7. Service Quality; Service Standardization.

Suggested Readings:

- Kapferer, Strategic Brand Management, Kogan Page
- Keller, *Strategic Brand Management, Building, Measuring and Managing Brand Equity,* Prentice Hall India.
- Zeithmal and Bitner, Services Marketing, Integrating Customer Focus Across The Firm, McGraw Hill.
- Christopher, *Service Marketing*, Prentice Hall India.

Discipline Specific Electives: Group D – Taxation Paper DSE.405D: Indirect Tax Procedure

Module I

1. Goods and Services Tax

- Return, Payment of Tax and Refund
- Assessment, Demands and Recovery, Advance Rulings
- Appeals and Revision, Offences and Penalties

Module: II

2. Customs Duty

- Importation, Exportation and Warehousing
- Duty drawback, Recovery, Demands and Refund, Advance Ruling
- Appeals and Revision, Offences and Prosecution

Suggested Readings:

- Datey, V.S., Indirect Taxes: Law and Practice, Taxmann.
- Datey, V.S., GST Law & Practice with Customs and FTP, Taxmann
- Bare Act: Central Goods and Services Tax Act, 2017
- Bare Act: West Bengal State Goods and Services Tax Act, 2017
- Bare Act: Integrated Goods and Services Tax Act, 2017
- Central Goods and Services Tax Rules, 2017
- West Bengal Goods and Services Tax Rules, 2017
- Integrated Goods and Services Tax Rules, 2017
- Singhania, V.K., *Direct Taxes Law and Practice with special reference to Tax Planning*, Taxmann.

Paper DSE.406D: Computerised Taxation and Return Filing

Module: I

- 1. Return Form, Mode of Submission, PAN, Quoting of Adhaar number
- 2. New Form 26AS, Use of e-tax calculator, E-Pay tax, Calculation of relief
- 3. e-filing without using digital signature and using digital signature and electronic verification code, Uploading of Return, View e-filed return ,e-verification

Module: II

- 4. Computation of GTI and tax payable(individual, company)
- 5. e-filing of return in proper form
- 6. e-verification/ generation of return verification form

Suggested Readings:

- Datey, V.S., Indirect Taxes: Law and Practice, Taxmann.
- Datey, V.S., GST Law & Practice with Customs and FTP, Taxmann
- Bare Act: Central Goods and Services Tax Act, 2017
- Bare Act: West Bengal State Goods and Services Tax Act, 2017
- Bare Act: Integrated Goods and Services Tax Act, 2017
- Central Goods and Services Tax Rules, 2017
- West Bengal Goods and Services Tax Rules, 2017
- Integrated Goods and Services Tax Rules, 2017
- Singhania, V.K., Direct Taxes Law and Practice with special reference to Tax Planning, Taxmann.

Discipline Specific Electives: Group E – E Commerce

Paper DSE.405E: Web-Designing and Digital Marketing Module I: Web-Designing

- Introduction to Internet: Concept, Evolution of internet, Significance, Types of Network, Internet Network Services and functions of internet; Internet Technology and Protocol; Internet Addressing Scheme; Internet Security – firewalls, basics of asymmetric cryptosystems; Internet Security Management - Information Privacy and Copyright Issues; Governance on Internet; Email Network and server, Email Protocol.
- 2. Basics of Web-Designing: Concept of www, web technology, types of websites, functioning of websites, difference between web designer and web developers, how to create a Basic Web Page, Web Page Layout techniques; Concept of HTML, HTML for content development, Cascading Style Sheets (CSS)-Selector Type, Common Properties, Photoshop Elements and Principles of Design, Interactivity tools.
- New Trends in Web-Designing: Role of Multimedia and Graphics, JavaScript, Use of Adobe Dreamweaver, Design a Facebook Page, Create You Tube Videos; Other Utilities
 GIF Animation, On-Page Search Engine Optimization, Google Webmasters Tools, Developing a Mobile Website.

Module II: Digital Marketing

- Introduction to Digital Marketing: Digital Marketing- concept, features, strategies; aligning internet with business objectives, User behavior in the digital space and Navigation; Branding and Customer Experience in digital age, Customer Insights – concept, importance in digital marketing, tools available.
- 5. Search Engine Marketing and Social Media: Search Engine Optimization (SEO) Search Engines Basics, Functioning of Search Engines, On & off-page Optimization; Search Engine Marketing - Concept, Understanding Google search - Organic & Paid, Overview of Google Adwords, Google Adsense, Microsoft AdCenter and Yahoo Search Marketing; Social Media Optimization – concept, bookmarking & aggregating, content, content sharing, knowledge sharing, connecting to social networking; Campaign Management, Pay Per Click (PPC) Management, Conversion Tracking, Targeting & Analytics, Keyword Selection, Conversion Metrics- CPA, CTR, Campaigns - Google PPC Campaigns, LinkedIn Campaigns, Facebook Campaign, YouTube Advertising; Use of Google Analytics.
- 6. Marketing through E-mails and Mobiles: E-mail Marketing User Behaviour, Segmentation, Key Metrics, Best Practice Case Studies, E-marketing strategies, Tracking landing pages, Choosing your metrics, A/B and Multivariate testing, Analyzing test results, Setting your budgets; Mobile Marketing - Concept, SMS Strategy, Mobile Advertising, Mobile Optimized Websites, Mobile Apps, Proximity Marketing.

- Jain S, Web Designing and Development: Training Guide, BPB Publications
- Mehra and Mehra, *Website Development Using HTML and CSS A Practical Step-By-Step Guide to Develop E-Commerce Store*, Unicorn Books
- Kotler P, Marketing 4.0: Moving from Traditional to Digital, John Wiley and Sons
- Bhatia P, Fundamentals of Digital Marketing, Pearson
- Ahuja V, *Digital Marketing*, Oxford Publications
- Dodson I, The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns, Wiley

Paper DSE.406E: E-Commerce Security and Law

Module I

- Introduction to E-commerce Security: E-commerce security concept, importance, security issues in E-commerce, security risks in E-commerce, sources of threats, types of threats.
- 2. **Network Security Issues:** Encryption, Protecting Web server with a Firewall, Firewall and the Security Policy, Network Firewalls and Application Firewalls, Proxy Server.
- Other Security Issues: Cryptography, Symmetric and Asymmetric Cryptosystem, public key certificates and infrastructures, authentication and authorization certificates, Role of electronic signature; EDI Security; Mobile code security, security of agent-based systems, secure electronic transactions, electronic payment systems, intellectual property protection.

Module II

- 4. Introduction to Cyber Law: Cyber law concept, worldwide scenario.
- 5. **Cyber Crime and Laws in India:** Cyber crime cases in E-commerce space- worldwide and Indian scenario; Cyber Law in India- Information Technology Act 2000- relevant provisions; A few cyber crime cases and their legal remedies under this Act.
- Other Laws Protecting Cyber Consumers in India: Protection of Cyber Consumers in India and Consumer Protection Act 1986, Specific relief Act 1963 and Sale of Goods Act 1930.

- Sood V, Cyber Laws Simplified, TMH (2001)
- Sharma V, Handbook of Cyber Laws-Macmillan (2002)
- Oberoi S, *e-Security and you*, TMH (2001)
- Greenstein & Feinman, *Electronic Commerce-Security, Risk Mgt and Control*, TMH (2000)
- Viswanathan A, Cyber Law- Indian And International Perspectives On Key Topics Including Data Security, E-Commerce, Cloud Computing And Cyber Crimes, Lexis Nexis.
- Ghosh A K, E-commerce Security: Weak links Best Defenses, Wiley
 - Ghosh A K, E-commerce Security and Privacy, Springer



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12/18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

<u>SI.</u>	. Subject	<u></u>	Subject
No.		No.	
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	Anthropotogy (Honours / General)	29	Mathematics (Honours / General)
2	Arabic (Honours / General)	30	Microbiology (Honours / General)
3	Persian (Honours / General)	31	Mol. Biology (General)
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)
5	Bio-Chemistry (Honours / General)	33	Physical Education (General)
6	Botany (Honours / General)	34	Physics (Honours / General)
7	Chemistry (Honours / General)	35	Physiology (Honours / General)
8	Computer Science (Honours / General)	36	Political Science (Honours / General)
. 9	Defence Studies (General)	37	Psychology (Honours / General)
" 10	Economics (Honours / General)	38	Sanskrit (Honours / General)
11	Education (Honours / General)	39	Social Science (General)
12	Electronics (Honours / General)	40	Sociology (Honours / General)
13	English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)
15	Environmental Studies (AECC2)	43	Women Studies (General)
16	Film Studies (General)	44	Zoology (Honours / General)
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries – IFFV (Major)
18	French (General)	46	Sericulture – SRTV (Major)
19	Geography (Honours / General)	47	Computer Applications – CMAV (Major)
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)
.21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales Management – ASPV (Maior)
22	History (Honours / General)	50	Communicative English – CMEV (Major)
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Dietetics CNDV (Major)
24	Home Science Extension Education	/ 52	Bachelor of Business Administration (BBA)
	(General)		(Honours)
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design – (B.F.A.D.) (Honours)
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)
27	Human Rights (General)	55	B. Music (Honours / General) and Music (General)
28	Journalism and Mass Communication (Honours / General)		

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar

BBAA101AE1. Environmental Studies (Credits 2, Marks100) Syllabus as in B.Com (Hons) under CBCS system

BBAA102C1. <u>Principles of Management & Organisational Behaviour</u> Credits -6 Marks-100

Course Objective:

To acquaint the students with the fundamentals of managing business and to understand individual and group behavior at work place so as to improve the effectiveness of an organization. The course will use and focus on Indian experiences, approaches and cases.

Course contents:

Unit 1

Basic forms of Business Ownership; Special forms of ownership: Franchising, Licensing, Leasing; Choosing a form of Business ownership; Corporate Expansion: mergers and acquisitions, diversification, forward and backward integration, joint ventures, Strategic alliance.

Evolution of Management Theory. Managerial functions and Roles. Insights from Indian practices and ethos.

Unit2

Overview of Planning: Types of Plans & The planning process; Decision making: Process Types Control: Eulerican Process and types of Control:

Process, Types. Control:Function, Process and types of Control;

Principles of organizing: Common organisational structures; Delegation &

Decentralization: Factors affecting the extent of decentralization, Process and Principles of delegation, coordination & communication.

Unit 3

Importance of organizational Behaviour. Perception and Attribution: Concept, Nature,

Process, Personality: Trait Theory Learning: Concept. Motivation: Concepts and their application, Need, Content & Process theories, Contemporary Leadership issues: Charismatic, Transformational Transactional Leadership. Managerial Grid.

Unit4

Groups and Teams: Definition, Difference between Groups and teams; Stages of Group Development, Group Cohesiveness, Types of teams.

Power : Types & Sources, Organisational Power and Politics: Nature of organisational politics. Conflict: Concept,

Sources, Types, Stages of conflict, Management of conflict, Negotiation. Organisational Change: Concept, Resistance to change, Managing resistance to change,

Readings:

1. Gilbert: Principles of Management, McGraw Hill.

2. Greenberg Jerald and Baron Robert. A.: Behaviour in Organisations:

Understanding and Managing The Human Sideof Work, Prentice Hall of India.

3.Kaul Vijay Kumar, Business Organisation & Management - Text and Cases, Pearson.

4.Kaul, Vijay Kumar, Management- Text & Cases, Vikas Publication.

5.Kavita Singh: Organisational Behaviour, Vikas Publication.

6.Koontz & Heinz Weihrich: Essential of Management, McGraw Hill.
7.Luthans Fred: Organisational Behaviour, Tata McGraw Hill.
8.Mc Shane L. Steven, Glinow Mary Ann Von & Sharma Radha R. - Organisational Behaviour; Tata McGraw Hill.
9.Newstrom John W.: Organisational Behaviour, Tata McGraw Hill.
10.Richard L. Daft: Principles of Management, Cengage Learning India.
11.Robbins Stephen P: Organisational Behaviour, Pearson.
12.Stephen P. Robbins & Mary Coulter: Management, Pearson.
13.Stoner & Wankel: Management, Prentice Hall of India.
14.Y.K. Bhushan: Fundamentals of Business Organisation & Management, Sultan Chand & Sons.
15. Navin Mathur, Management Gurus , National Publishing House, New Delhi

BBAA103C2 Business Accounting Credits -6

Marks-100

Objective:

To familiarize students with the mechanics of preparation of financial statements, understanding corporate financial statements, their analysis and interpretation.

Course Contents

Unit I

Introduction to Financial Accounting. Accounting as an Information System. Importance, Scope, and Limitations. Users of Accounting Information. Generally Accepted Accounting Principles. Introduction to Fair value Accounting The Accounting Equation. Nature

Accounting Principles. Introduction to Fair value Accounting The Accounting Equation. Nature of Accounts and Rules of Debit

and Credit. Recording Transactions in General Journal. Recording Transactions in threecolumn Cash Book. An overview of Subsidiary books – Purchase Book, Purchase Returns Book, Sales Book, and Sales Returns Book. Opening and Closing Entries. Preparation of Ledger Accounts. Preparation of Trial Balance. Adjustment Entries. Post-adjusted Trial Balance. Bank Reconciliation Statement.

Unit2

Introduction to International Financial Reporting Standards (IFRS). Understanding Accounting Standards issued by the ICAI related to Disclosure of Accounting Policies, Depreciation Accounting, and Revenue Recognition. Methods of charging Depreciation – Straight-line Method, and Written-down-value Method. <u>Inventory valuation (LIFO, weighted</u> <u>Avg. Cost) Revenue recognition.</u>

Unit3

Understanding contents of Financial Statements of a Joint Stock Company as per Companies Act 2013. Understanding the contents of a Corporate Annual Report. Preparation of CashFlow Statement as per AS-3 (revised). Analyzing Financial Statements: Objectives of Financial Statement Analysis; Sources of information;

Unit4

Standards of Comparison; Techniques of Financial Statement Analysis -Horizontal Analysis, Vertical Analysis, and Ratio Analysis. Meaning and Usefulness of Financial Ratios; Analysis of Financial Ratios from the perspective of different Stakeholders like Investors, Lenders, and Short-term Creditors; Profitability Ratios, Solvency Ratios, Liquidity Ratios, and Turnover Ratios; Limitations of Ratio Analysis.

Readings:

1.S.N. Maheshwari, Suneel K. Maheshwari, and Sharad K.

Maheshwari: An Introduction to Accountancy, Vikas Publishing House Pvt. Ltd.

2.R. Narayanaswamy, Financial Accounting: A Managerial Perspective, PHI Learning Pvt. Ltd.

3.Charles T. Horngren, Gart L. Sundem, John A. Elliott, and Donna R. Philbrick, Introduction to Financial Accounting, Pearson.

4.J.R. Monga, Financial Accounting: Concepts and Applications, Mayur Paperbacks. 5.T.P. Ghosh, Financial Accounting for Managers: Taxmann Allied Services Pvt. Ltd.

BBAA104GE1 ENTREPRENEURSHIP DEVELOPMENT Credits -6 Marks-100

Objective:

This course provides students with a solid introduction to the entrepreneurial process of creating new businesses, role of Creativity and innovation in Entrepreneurial

start-ups, manage family-owned companies , context of social innovation and social entrepreneurship and issues and practices of financing entrepreneurial businesses.

UNIT-1 ENTREPRENEURIAL MANAGEMENT

The evolution of the concept of entrepreneurship, John Kao's Model on Entrepreneurship, Idea Generation, Identifying opportunities and Evaluation; Building the Team /Leadership; Harvesting and Exit Strategies; Corporate Entrepreneurship/ Intrapreneur, Risk Analysis.

UNIT-2 ENTREPRENEURSHIP, CREATIVITY AND INNOVATION

Innovation, Creativity; Creative Teams; Sources of Innovation in Business; Managing Organizations for Innovation and Positive Creativity.

UNIT-3 FAMILY BUSINESS AND ENTREPRENEURSHIP

Role, Concept, structure and kinds of family firms ; Culture and evolution of family firm; Managing Business, family and stakeholders relationships ; Conflict and conflict resolution in family firms ; Managing Leadership ,succession; women's issues in the family business ;Encouraging change in the family business system.

UNIT-4 FINANCING THE ENTREPRENEURIAL BUSINESS

Arrangement of funds; Traditional sources of financing, Loan syndication, Consortium Finance. Loan application process, Venture capital.

UNIT-5 EMERGING ISSUES IN START UP IN INDIA

Concept of Start up. Defer & mechanisms of start up as GOI initiatives. Role of start up in business environment.
Readings

1.Drucker, P. F. (2006). Innovation and entrepreneurship: Practice and principles. USA: Elsevier.

2.Holt, D. H. (2004). Entrepreneurship new venture creation. New Delhi: Prentice Hall of India.

3.Kaplan, J. (2004). Patterns of entrepreneurship. Wiley.

4.Prahalad, C. K. (2006). Fortune at the bottom of the pyramid ,eradicating poverty through profits. Wharton school Publishing.

BBAA201AE2 Business Communication

Business Communication/ Communicative English Marks-100

Credits -2 Unit 1: Introduction

Objectives, importance, elements, process, forms, models, principles of effective communication, barriers to communication and remedial measures, role of communication in conflict resolution Formal and informal communication, Grapevine, Characteristics of corporate communication, Communication network

Unit 2: Types of Communication

English Language and communication: Parts of Speech Person, Gender, Number ,Use of Tense, Prepositions and Adverbs of Time and Place, Degree, Adjectives Forming questions, Negation and Relative Clauses Interchange of Sentences, Narration, Voice change, Proverbs, Vocabulary, Proper use of words, Idioms.

Unit 3: Tools of Communication

Emergence of communication technology, Modern Forms of communication, Fax, Email, Video Conferencing, English for Special and Technical Purpose Official letter, Paragraph writing, Note-making, Topic Sentence. Telephonic Conversation, Group Discussion regarding job interview

Unit 4: Drafting

Business Meetings, Meeting Etiquettes, Notice, Circular, Resolution and minutes, Business letter writing- Offer letter, Quotation, Status enquiry, Confirmation, Execution, Refusal and cancellation of order, Recommendation, Credit collection, Claim, Bank loan. C. V. Writing. Scientific and technical subjects, Formal and informal writings Reports, handbooks, manuals, letters, memorandum.

Suggested Readings •

Anjanee, S. & Bhavana Adhikari, Business Communication, TMH

- Chaturvedi & Chaturvedi, Business Communication : Concepts, Cases and Applications, Pearson
- M.K.Shegal&Vandana Khetarpal, Business Communication, Excel Books
- R.K.Madhukar, Business Communication, Vikash Publishing House Pvt. Ltd.
- Rao, Kumar & Bindu, Business Communication, Cengage
- Khanna, Puja., Business Communication, Vikash
- Raman & Sharma, Technical Communication, Oxford

BBAA202C3 Statistics for Business Decisions

Credits -6

Marks-100

Objective: To familiarize the students with various Statistical Data Analysis tools that can be used for effective decision making. Emphasis will be on the application of the concepts learnt.

Course contents:

Unit 1:

Definition of Statistics; Importance and scope of Mathematics and Statistics in business decisions; Limitations. Primary and Secondary data; Methods of data collection; Tabulation of data; Graphs and charts; Frequency distributions; Diagrammatic presentation of frequency distributions.

Unit 2:

Measures of Central Value: Characteristics of an ideal measure; Measures of Central Tendency - mean, median, mode, harmonic mean and geometric mean. Merits, Limitations and Suitability of averages. Relationship between averages. Measures of Dispersion: Meaning and Significance. Absolute and Relative measures of dispersion - Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Moments, Skewness, Kurtosis.

Unit 3:

Correlation Analysis: Meaning and significance. Correlation and Causation, Types of correlation. Methods of studying simple correlation - Scatter diagram, Karl Pearson's coefficient of correlation, Spearman's Rank correlation coefficient, Regression Analysis: Meaning and significance, Regression vs. Correlation. Linear Regression, Regression lines (X on Y, Y on X) and Standard error of estimate.

Unit 4:

Analysis of Time Series: Meaning and significance. Utility, Components of time series, Models (Additive and Multiplicative), Measurement of trend: Method of least squares, Parabolic trend and logarithmic trend; Index Numbers: Meaning and significance, problems in construction of index numbers, methods of constructing index numbersweighted and unweighted, Test of adequacy of index numbers, chain index numbers, base shifting, splicing and deflating index number.

Unit 5:

Probability: Meaning and need. Theorems of addition and multiplication. Conditional probability. Bayes' theorem, Random Variable- discrete and continuous.

Probability Distribution: Meaning, characteristics (Expectation and variance) of Binomial, Poisson, and Normal distribution. Central limit theorem.

Readings:

1. S.P. Gupta (S.P.): Statistical Methods, Sultan Chand & Sons, 34th Edition.

2. Richard Levin & David Rubin : Statistics for management, Prentice Hall.

3. Anderson, Sweeny & Williams: Statistics for Business and Economics, South Western

BBAA203C4 Managerial Economics Credits -6

Objective:

Marks-100

The purpose of this course is to apply micro economic concepts and techniques in evaluating business decisions taken by firms. The emphasis is on explaining how tools of standard price theory can be employed to formulate a decision problem, evaluate alternative courses of action and finally choose among alternatives. Simple geometry and basic concepts of mathematics will be used in the course of teaching.

Course Contents

Unit 1:

Demand, Supply and Market equilibrium: individual demand, market demand, individual supply, market supply, market equilibrium; Elasticities of demand and supply : Price elasticity of demand, income elasticity of demand, cross price elasticity of demand, elasticity of supply; Application of elasticity concepts in marketing/sales decision making. Concepts of demand elasticities and relationship into total revenue in pricing decisions. Theory of consumer behavior : cardinal utility theory, ordinal utility theory(indifference curves, budget line, consumer choice, price effect, substitution effect, income effect for normal, inferior and giffen goods), revealed preference theory.

Unit 2:

Producer and optimal production choice : optimizing behavior in short run(geometry of product curves, law of diminishing margin productivity, three stages of

production), optimizing behavior in long run (isoquants, isocost line, optimal combination of resources). Applications of the concept of cost elasticities to determine plant size. Concept of Minimum Efficient Scale in transportation industry.* Costs and scale : traditional theory of cost (short run and long run, geometry of cot curves, envelope curves), modern theory ofcost (short run and long run), economies of scale, economies of scope.

Unit 3:

Theory of firm and market organization : perfect competition (basic features, short run equilibrium of firm/industry, long run equilibrium of firm/industry, effect of changes in demand, cost and imposition of taxes) ; monopoly (basic features, short run equilibrium, long run equilibrium, effect of changes in demand, cost and imposition of taxes, comparison with perfect competition, welfare cost of monopoly), price discrimination, multiplant monopoly ; monopolistic competition (basic features, demand and cost, short run equilibrium, long run equilibrium, excess capacity). Role of advertisement in monopolistic competition, with effect of changes in demand curve model, dominant price leadership model,

prisoner's dilemma).

Unit 4:

Factor market: demand for a factor by a firm under marginal productivity theory (perfect competition in the product market, monopoly in the product market), market demand for a factor, supply of labour, market supply of labour, factor market equilibrium.

Readings:

Dominick Salvatore (2009). Principles of Microeconomics (5thed.) Oxford University Press
 Lipsey and Chrystal. (2008). Economics. (11thed.) Oxford University Press
 Koutosyannis (1979). Modern Micro Economics. Palgrave Macmillan
 Pindyck, Rubinfeld and Mehta. (2009). Micro Economics. (7thed.). Pearson.
 *5. Mark Hershey, Managerial Economics

BBAA204GE2 Business Ethics.

Credits -6

Marks-100

Objective:

The objective of this paper is to make the students more clear about the importance of ethics in business and practices of good corporate governance. It also talks about the corporate social responsibility.

Course Contents

Unit 1:

Business ethics: Meaning of ethics, why ethical problems occur in business. Ethical

principles in business: Teleological and Deontological Theories of ethical reasoning ; ethics of care, Integrating utility, rights, justice and caring; Virtue ethics, Ethical issues in business: Worker's and employee's rights and responsibilities, Profit maximization vs. social responsibility.

Unit 2:

Corporate social responsibility: Concept; stakeholder theory and corporate social responsibility; types of corporate responsibility; multinational business and corporate citizenship; Corporate social responsibility under Companies Act 2013

Unit 3:

Corporate governance: concept, Need to improve corporate governance standards, Features of good governance, Role played by regulators to improve corporate governance, accounting standards and corporate governance, corporate disclosure, insider trading; The Board –Quality, Composition and role of Board, Outside Directors on the board (independent, nominee), Executive and Non-Executive directors, SEBI clause 49, directors and financial institutions in enhancing corporate governance, critical issues in governance of board directors, CEO Duality.

Unit 4:

Role of auditors in enhancing corporate governance, duties and responsibilities of auditors, corporate governance and internal auditors, Whistle blowing: Kinds of whistle blowing, precluding the need for whistle blowing. Discrimination, affirmative action, and reverse discrimination: Equal employment opportunity, Affirmative action, Preferential hiring, Corporate social responsibility: Meaning, Evolution of corporate social responsibility, common indicators for measuring business social performance, reporting social responsibility measures in annual report.

1.Manuel G Velasquez : Business ethics- concepts and cases Pearson.

2.Luthans Hodgetts and Thompson: Social issues in business, Macmillan USA

3.A.C. Fernando: Business Ethics Pearson Education.

4.A.C. Fernando: Corporate Governance Pearson Education.

5. Adrian Davies: Strategic approach tocorporate governance Gower Pub Co.

6.N. Gopalswamy: Corporate governance a new paradigm A H Wheeler Publishing Co Ltd.

7.Marianne M Jennings: Cases in Business Ethics Indian South-Western College Publishing

8.Kevin Gibson: Ethics and Business, An Introduction, Cambridge Applied Ethics Cambridge University Press

9. Bhanumurthy K V: Ethics and Social Responsibility of Business, Pearson Education India.

BBAA301C5 Human Resource Management Credits -6

Marks-100

Objective:

The objective of this course is to help the students to develop an understanding of the concept & techniques of essential functions of human resource management. The course will use and focus on Indian experiences, approaches and cases.

Course Contents

Unit 1

Human Resource Management: Concept, Functions, roles, Knowledge, Skill, Ability & competencies, HRD-definition, goals and challenges. The changing environment of HRM – globalization,

cultural environment, technological advances, workforce diversity, corporate downsizing, changing skill requirement, Work life balance, HR role in strategy formulation & gaining competitive advantage.

Unit 2

Human Resource Planning: Process, Forecasting demand & supply, Human Resource Information System (HRIS)succession planning. Job analysis – Uses,

methods, Job description & Job specifications. HR accounting and Human Resource Development (HRD) audit concept. Recruitment, Selection & Orientation: internal & external sources, e- recruitment, selection process, orientation process. Unit 3

Training: Concept, Needs, Systematic approach to training, Methods of training. Management development: Concept & Methods. Performance management system: concept, uses of performance appraisal, performance management methods, factors that distort appraisal, appraisal interview .Career planning: career anchors, career life stages. Compensation: Steps of determining compensation, job evaluation, components of pay structure, factors influencing compensation levels, wage differentials & incentives, profit sharing, gain sharing, employees' stock option plans. Brief introduction of social security, health, retirement & other benefits.

Unit 4

Industrial Relations: Introduction to Industrial Relations, Trade unions role, types, functions, problems, industrial dispute- concept, causes & machinery for settlement of disputes-grievance, concepts, causes & grievance redressal machinery, discipline-

concept, aspect of discipline & disciplinaryprocedure, Collective bargaining- concept, types, process, problems, essentials of effective collective bargaining welfare.

Readings:

1.De Cenzo, D.A. & Robbins: Fundamentals of Human Resource Management, New York: John Wiley & Sons.

2.Dessler, G: Human Resource Management, Pearson.

3. Monappa & Saiyaddin: Personnel Management, Tata McGraw Hill.

4. Rao, V.S.P.: Human Resource Management- Text and Cases, Excel Books.

5.R. Wayne Mondy & Rober M. Noe: Human Resource Management, Pearson.

6. K. Aswathapa:

7. biswajit Pattanayak:

8. S. S. Khanka

BBAA302C6. Marketing Management

Credits -6

Marks-100

Objective:

This course aims to familiarize students with the marketing function in organizations. It will equip the students with understanding of the Marketing Mix elements and sensitize them to certain emerging issues in Marketing. The course will use and focus on Indian experiences, approaches and cases

Course Contents:

Unit 1:

Introduction: Nature, Scope and Importance of Marketing, Evolution of Marketing; Core marketing concepts; Company orientation - Production concept, Product concept, Selling concept, Marketing concept, Holistic marketing concept. Marketing Environment: Demo graphic, economic, political, legal, socio cultural, technological environment (Indian context); Portfolio approach – Boston Consultative Group (BCG) matrix Unit 2:

Segmentation, Targeting and Positioning: Levels of Market Segmentation, Basis for Segmenting Consumer Markets, Difference between Segmentation, Targeting and Positioning; Unit 3:

Product & Pricing Decisions: Concept of Product Life Cycle (PLC), PLC marketing strategies, Product Classification, Product LineDecision, Product Mix Decision, Branding Decisions, Packaging & Labelling, New Product Development. Pricing Decisions: Determinants of Price, Pricing Methods (Non-mathematical treatment), Adapting Price (Geographical Pricing,

Promotional Pricing and Differential Pricing).

Unit 4:

Promotion Mix: Factors determining promotion mix, Promotional Tools -

basics of Advertisement, Sales Promotion, Public Relations &

Publicity and Personal Selling; Place (Marketing Channels): Channel functions, Channel Levels, Types of Intermediaries: Types of Retailers, Types of Wholesalers. Marketing of Services -Unique Characteristics of Services, Marketing strategies for service firms 7Ps. Readings:

1.Kotler, P. & Keller, K. L.: Marketing Management, Pearson.

2.Kotler, P., Armstrong, G., Agnihotri, P. Y., & Ul Haq, E.: Principles of Marketing:

A South Asian Perspective, Pearson.

3.Ramaswamy, V.S. & Namakumari, S.: Marketing Management: Global Perspective-Indian Context, Macmillan Publishers India Limited.
4.Zikmund, W.G. & D' Amico, M.: Marketing, Ohio: South-Western College Publishing.

BBAA303C7. Management Accounting Credits -6

Marks-100

Objective:

To acquaint students with role of Management Accounting in planning, control and decision-making.

Course Contents:

Unit 1

Nature, Scope of Management Accounting: Meaning, definition, nature and scope of Management Accounting; Comparison of Management Accounting with Cost Accounting and Financial Accounting. Cost concepts: Meaning, Scope, Objectives, and and Importance of Cost Accounting; Cost, Costing, Cost Control, and Cost Reduction; Elements of Cost, Components of total Cost, Cost Sheet. Classification of Costs: Fixed, Variable, Semi-variable, and Step Costs; Product, and Period Costs; Direct, and Indirect Costs; Relevant, and Irrelevant Costs; Shut-down, and Sunk Costs; Controllable, and Uncontrollable Costs; Avoidable, and Unavoidable Costs; Imputed / Hypothetical Costs; Out-of-pocket Costs; Opportunity Costs; Expired, and Unexpired Costs; Conversion Cost. Cost Ascertainment: Cost Unit and Cost Center. Introduction to Overhead allocation, Overhead apportionment, and Overhead absorption.

Unit 2

Cost-Volume-Profit Analysis: Contribution, Profit-Volume Ratio, Margin of safety, Cost Break-even Point, Composite Break-even Point, Cash Break-even Point, Key Factor, Break-even Analysis. Relevant Costs and Decision Making: Pricing, ProductProfitability, Make or Buy.

Unit 3

Budgets and Budgetary Control:Meaning, Types of Budgets, Steps in Budgetary Control, Fixed and Flexible Budgeting, Cash Budget. Responsibility Accounting: Concept, Significance, Different responsibility centers, Divisional performance – Financial measures, Transfer pricing (concept, simple sums).

Unit 4

Standard Costing and Variance Analysis: Meaning of Standard Cost and Standard Costing, Advantages, Limitations and Applications; Material, Labor, Overhead and Sales variances. Introduction to Target Costing, Life Cycle Costing, Quality Costing, and Activity based Costing.

Readings:

1.C.T. Horngren, Gary L. Sundem, Jeff O. Schatzberg, and Dave Burgstahler: Introduction to Management Accounting, Pearson2.M.N. Arora: A Textbook of Cost and Management Accounting, Vikas Publishing House Pvt. Ltd.

3.M.Y. Khan, and P.K. Jain, Management Accounting: Text Problems and Cases, McGraw Hill Education (India) Pvt. Ltd.

4.S.N. Maheshwari, and S.N. Mittal, Cost Accounting: Theory and Problems, Shree Mahavir Book Depot (Publishers)

BBAA304GE3 Production and Operations Management. Credits -6

Marks-100

Objective:

To understand the production and operation function and familiarize students with the technique for planning and control.

Course Contents:

Unit 1

Introduction to Production & Operations Management: Definition, need, responsibilities, key decisions of OM, goods vs. services. Operations as a key functional area in an organisation. Operation Strategies-Definition, relevance, strategy formulation process, order qualifying and order winning attribute Maintenance Management: Need of maintenance management, equipment life cycle (Bathtub curve), measures for maintenance performance (MTBF, MTTR and availability). Lean production: Definition of lean production, lean Demand Pull logic, waste in operations, elements that address eliminati

on of waste, 2 card kanban Production Control system. Unit 2

Forecasting-Definition, types, qualitative (grass roots, market research and Delphi method) and quantitative approach (simple moving average method, weighted moving

average and single exponential smoothing method), forecast error, MAD.

Scheduling: Operation scheduling, goals of short term scheduling, job sequencing (FCFS,

SPT, EDD, LPT, CR) & Johnson's rule on two machines, Gantt charts.

Unit 3

Process Selection: Definition, Characteristics that influence the choice of alternative processes (volume and variety), type of processes- job shop, batch, mass and continuous, product-process design Matrix and Services design matrix, technology issues in process design, flexible manufacturing systems (FMS), computer integrated manufacturing (CIM). Layout Decision: Layout planning – Benefits of good layout, importance, different types of layouts (Process, Product, Group technology and Fixed position layout). Assembly line

balancing by using LOT rule; Location Decisions & Models: Facility Location – Objective, factors that influence location decision, location evaluation methods- factor rating method. Capacity Planning: Definition, measures of

capacity (input and output), types of planning over time horizon. Decision trees analysis Unit 4

Aggregate Planning: Definition,nature, strategies of aggregate planning, methods of aggregate planning (level plan, chase planand mixed plan, keeping in mind demand, workforce and average inventory), StatisticalQuality control: Variations in process (common & assignable causes), Control charts: Variable measures (mean and range chart), Attribute measures (proportion of defects and no. of defects)using control tables. Elementary Queuing Theory : Poisson- Exponential Single Server Model with Infinite Population.(question based on M/M/1.

Readings:

1.Mahadevan B, Operations Management Theory & Practice, Pearson Education 2.Heizer Jay and Render Barry, Production & Operations Management, Pearson Education

3.Chase R B, Aquilano N J , Jacobs F R and Agarwal N, Production & Operations Management Manufacturing and Services, Tata McGraw Hill

4.S.P. Gupta, Statistical methods, Sultan Chand & Sons.

5.Adam, E.E and Ebert, Production & operations Management, Prentice Hall of India, New Delhi

6.S.N. Chary, Production & operations management– Tata McGraw Hill, New Delhi 7.Buffa E S, &Sarin R K, Modern Production / Operations Management (8th edition) John Wiley, 1994

8. Gaither and Frazier, Operations Management, Thomson South-Western

9. Operations Research, P. K. Gupta, Man Mohan, KantiSwarup, Sultan Chand

10. Operations Research, V. K. Kapoor. Sultan Chand & Sons

BBAA305SE1. Information Technology Tools for Business Credits -4

Marks-100

Spreadsheets

Introduction: Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets, working with multiple worksheets and multipleworkbooks, controlling worksheet views, naming cells using name box, name create and name define.

Using formulae and functions: Understanding absolute, relative and mixed referencing in formulas, referencing cellsin other worksheets and workbooks, correcting common formula errors, working with inbuilt function categories like mathematical, statistical, text, lookup, information, logical, database, date and time and basic financial functions. Consolidating worksheets and workbooks using formulae and data consolidate command Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae. Implementing file level security and protecting data within the worksheet

Creating charts and graphics: Choosing a chart type, understanding data points and data series, editing and formatting chart elements, and creating sparkline graphics.

Analysing data using pivot tables: Creating, formatting and modifying a pivot table, sorting, filtering and grouping items, creating calculated field and calculated item,

creating pivot table charts, producing a report with pivot tables. Performing what-if analysis: Types of what if analysis (manual, data tables, scenario manager), what-if analysis inreverse (goal-seek, solver) Exchanging data using clipboard, object linking and embedding. Wordprocessing

Introduction: Creating and saving your document, displaying different views, working with styles and character formatting, working with paragraph formatting techniques using indents, tabs, alignment, spacing, bullets and numbering and creating borders.

Page setup and sections: Setting page margins, orientation, headers and footers, end notes and foot notes, creating section breaks and page borders.

Working with tables: Creating tables, modifying table layout and design, sorting,

inserting graphics in a table, table math, converting text to table and vice versa.

Create newspaper columns, indexes and table of contents. Spell check your document using inbuilt and custom dictionaries, checking grammar and style ,using thesaurus and finding and replacing text. Create bookmarks, captions and cross referencing, adding hyperlinks, adding sources and adding sources and compiling and bibliography.

Mail merge: Creating and editing your maindocument and data source, sorting and filtering merged documents and using merge instructions like ask, fill-in and if-then-else.

Linking and embedding to keep things together.

Powerpoint presentation

Introduction: Creating a blank presentation using a design template, basing a new presentation on an existing one, creating and managing slides, using content place holders, creating graphs, tables, diagrams, organization charts, inserting clip art and

images. Viewing and navigating a presentation: Organising ideas in outline view, using slide sorter to rearrange a presentation, previewing presentation in slide show, understanding master views, using title master, slide master, handout master and notes master, working with headers and footers, using hyperlinks, advanced navigation

with action settings, navigation short hand with action buttons Animation and multimedia: Using and applying animation schemes, custom animation, understanding sound file formats and video types, adding music, sound and video clips. Final presentation: Applying transition to slides, controlling transition speed, using

hidden slides, using custom shows, using on screen pen and adding and accessing notes during a presentation.

Databases

Introduction to Database Development: Database Terminology, Objects, Creating Tables, working with fields, understanding Data types, Changing table design, Assigning Field Properties, Setting Primary Keys, using field validation and record validation rules, Indexing, working with multiple tables, Relationships & Integrity Rules, Join Properties, Record manipulation, Sorting & Filtering. Select data with queries: Creating Query by design & by wizard (Select, Make Table, Append, Delete, Cross Tab, Update, Parameterized Query, Find Duplicate and Find Unmatched), Creating multi table queries, creating & working with table joins. Using operators & expressions: Creating simple & advance criteria. Working with forms: Creating Basic forms, working with bound, unbound and calculated controls, understanding property sheet, Working with Data on Forms: Changing Layout, creating Sub Forms, creating listbox, combo box and option groups.

Working with Reports: Creating Basic Reports, Creating Header & Footer, Placing Controls on reports, sorting & grouping, Creating Sub reports.

BBAA401C8 BUSINESS RESEARCH Credits -6

Marks-100

Objective:

To provide an exposure to the students pertaining to the nature and extent of research orientation, which they are expected to possess when they enter the industry as practitioners. To give them an understanding of the basic techniques and tools of business marketing research Course Content: Unit 1: Nature and Scope of Marketing Research– Role of Marketing Research in decision making. Applications of Marketing Research – marketing research; The Research process

 Steps in the research process; the research proposal; Problem Formulation: Management decision problem Vs. Marketing Research problem.
 Unit 2:

Research Design: Exploratory, Descriptive, Causal. Secondary Data Research: Advantages & Disadvantages of Secondary Data, Criteria for evaluating secondary sources, secondary sources of data in Indian Context, Syndicated Research (in India). Unit 3:

Primary Data Collection: Survey Vs. Observations. Comparison of self-administered, telephone, mail, emails techniques. Qualitative Research Tools: Depth Interviews focus groups and projective techniques; Measurement & Scaling: Primary scales of Measurement-Nominal, Ordinal, Interval & Ratio. Scaling techniques-paired comparison, rank order, constant sum, semantic differential, itemized ratings, Likert Scale; Questionnaire-form & design.

Unit 4: Sampling Theory : Sampling techniques, determination of sample size; different types of sampling, Parameter, Statistic, Standard Error of sample mean, sample proportion, Difference of sample mean and sample proportion, Sampling distribution. Simple problem.

Estimation: point and interval estimation; Criteria of a good estimator; Methods of Point Estimation – The Method of Maximum Likelihood and The Method of Moments; Interval Estimates – Interval estimates and confidence intervals; confidence level and confidence interval; Calculating interval estimates of the mean and proportion from large samples. Unit 5:

Hypothesis testing: Concept; Level of Significance; Process of testing: Z test (mean, diff. of mean, proportion, diff. of proportion) t test (mean), paired t test, Chi square test, Introduction to theoretical concept of ANOVA, Factor Analysis and Discriminant Analysis.

Readings:

1. Zikmund, Babin & Carr: Business Research Methods, South-Western.

2. Cooper & Schindler: Business Research Methods McGraw-Hill Education,

3. Churchill: Marketing Research: Methodological Founda

tions, Cengage Learning.

4. Aaker, Kumar, Day - Marketing Research. Wiley.

5. Naresh Malhotra – Marketing Research, Pearson.

BBAA402C9. MACRO ECONOMICS

Credits -6

Marks-100

Objective:

This course deals with the principles of Macroeconomics. The coverage includes determination of and linkages between major

economic variables ; level of output and prices, inflation, interest rates and exchange rates. The course is designed to study the impact of monetary and fiscal policy on the aggreg ate behavior of individuals.

Course Content:

Unit 1:

Measurement of macroeconomic variables: National Income Accounts, Gross Domestic Product, National Income, Personal and Personal disposable income; Classical theory of income and employment: Quantity Theory of Money – Cambridge version, Classical aggregate demand curve, Classical theory of interest rate, effect of fiscal and monetary policy.

Unit 2:

Keynesian theory of Income and employment simple Keynesian model, components of aggregate demand, equilibrium income, changes in equilibrium, multiplier (investment, Government expenditure, lump sum tax, foreign trade), effect of fiscal and monetary policy, crowding out, composition

of output and policy mix, policy mix in action; ISLM model : properties of ISLM curves, factors affecting the position and slope of ISLM curves, determination of equilibrium income and interest rates, effect of monetary and fiscal policy, relative effectiveness of monetary and fiscal policy.

Unit3:

Money: functions of money, quantity theory of money, determination of money supply and demand, H theory of money multiplier, indicators and instruments of monetary control; Inflation: meaning, demand and supply side f

actors, consequences of inflation, anti-inflationary policies, natural rate theory, monetary policy-output and inflation, Phillips curve (short run and long run)

Unit 4:

Open Economy: brief introduction to BoP account, market for foreign exchange and exchange rate, monetary and fiscal pol icy in open economy, Mundell Fleming model (perfect capital mobility and imperfect capital mobility under fixed and flexible exchange rate). Systems of exchange rates fixed-adjusted pegflexible. Role of monetary authority in these cases.

Readings:

1.Froyen, R.P. (2011): Macroeconomics-theories and policies (8thed.) . Pearson:

2.Dornbusch and Fischer (2010). Macroeconomics (9th ed.). Tata McGraw Hill

3.N Gregory Mankiw (2010). Macroeconomics (7thed.). Worth Publishers

4. Olivier Blanchard, Macroeconomics (2009). (5thed.) Pearson

BBAA403C10. FINANCIAL MANAGEMENT

Credits -6

Marks-100

Objective:

To acquaint students with the techniques of financial management and their applications for business decision making.

Course Content:

Unit I

Nature of Financial Management: Finance and related disciplines; Scope of Financial Management; Profit Maximization, Wealth Maximization - Traditional and Modern

Approach; Functions of finance – Finance Decision, Investment Decision, Dividend Decision; Objectives of Financial Management; Organisation of finance function;

Concept of Time Value of Money, present value, future value, and annuity; Risk & Return: Historical return, expected return, absolute

return, holding period return, annualized return, arithmetic & geometric return; Risk - Systematic & unsystematic risk (Concept)

Unit 2

Long -term investment decisions: Capital Budgeting - Principles and Techniques; Nature and meaning of capital budgeting; Estimation of relevant cash flows and terminal value; Evaluation techniques - Accounting Rate of Return, Net Present Value, Internal Rate of Return & MIRR, Net Terminal Value, Profitably Index Method. Concept and Measurement of Cost of Capital:Explicit and Implicit costs; Measurement of cost of capital; Cost of debt; Cost of perpetual debt; Cost of Equity Share; Cost of Preference Share; Cost of Reta ined Earning; Computation of over-all cost of capital based on Historical and Market weights. Unit 3.

Capital Structures: Approaches to Capital Structure Theories - Net Income approach, Net Operating Income approach, Modigliani-Miller (MM) approach, Traditional approach,

Capital Structure and Financial Distress, Trade-Off Theory. Dividend Policy Decision - Dividend and Capital; The irrelevance of dividends: General, MM hypothesis; Relevance of dividends: Walter's model, Gordon's model; Leverage Analysis: Operating and Financial Leverage; EBIT -EPS analysis; Combined leverage. Unit 4

Working Capital Management: Management of Cash - Preparation of Cash Budgets (Receipts and Payment Method only); Cash management technique, Receivables Management – Objectives; Credit Policy, Cash Discount, Debtors Outstanding and Ageing Analysis; Costs - Collection Cost, Capital Cost, Default Cost, Delinquency Cost, Inventory Management (Very Briefly) - ABC Analysis; Minimum

Level; Maximum Level; Reorder Level; SafetyStock; EOQ, Determination of Working Capital.

Readings

 M.Y. Khan & P.K. Jain: Financial Management Text Problem and Cases, Tata McGraw Hill Pubilshlng Co. Ltd.
 R. P. Rustogi: Financial Management: Theory Concepts and Practices, Taxmann Publication.
 I.M. Pandey: Financial Management: Theory and Practices, Vikas Publishing House
 R.A. Brealey, S.C. Myers, F. Allen& P. Mohanty: Principles of Corporate Finance, McGraw Hill Higher Education
 J.V. Horne & J.M. Wachowicz: Fundamentals of Financial Management Prentice

BBAA404GE4. TAX PLANNING

Credits -6

Marks-100

Objective:

The objective of this course is to acquaint the students with the tax structure for individuals and corporates and also its implications for planning.

Course Contents:

Unit 1

Income tax concepts: Previous Year, Assessment Year, Person, Assessee, Income (including agricultural income), Residential Status and their incidence of tax, Gross Total Income, Total Income; Income which do not form part of total income, Tax Evasion, Tax Avoidance, computation of Income for House Property.

Unit 2

Computation of Income under the head Salary Unit 3

Computation of Income under the Head: Profits and gains from Business or Profession. Capital gains and Income from other sources.

Unit 4

Clubbing of Income, Set-off and carry-forward of losses , Deductions from gross total income as applicable to an individual and Business Units; Computation of total income and tax liability of an individual and Business Units, Procedure for assessment: E-filing of return, Introduction to the concept of Goods and Services Tax (GST)

Unit5

Meaning of Tax Planning and Management; Nature, scope and justification of corporate tax planning; Computation of taxable income and tax liability of companies: Minimum Alternative Tax, Introduction to tax planning with reference to financial decisions. Introduction to tax planning with reference to amalgamation or demerger of companies (only theory).

Text Books:

1. Singhania, V.K. Student Guide to Income Tax. Taxmann Publications Pvt. Ltd. (Latest

ed.)

2. Ahuja& Gupta. Simplified Approach to Corporate Tax. Flair Publications Pvt. Ltd (latest edition)

References:

1. Ahuja& Gupta. Simplified Approach to Income Tax Flair, Publications Pvt. Ltd.

2. Mahesh Chandra & Shukla, D.C. Income Tax Law & Practice Pragati Publications.

3. Goyal, S.P. Tax Planning and Management. Sahitya Bhawan Publications.

4. Singhania, V.K .Student Guide to Income Tax. (University ed.). Taxmann Publications Pvt. Ltd. Online Readings/Supporting Material:

- 1. Finance Act for the relevant assessment year.
- 2. CBDT Circulations.
- 3. Latest Court Judgements for the relevant Assessment year.

BBAA404GE4 INDIA'S DIVERSITY AND BUSINESS Credits -6 Marks-100

Objective :

The objective of the paper is to understand the bases of India's diversity and its linkages with the people, livelihood, occupational diversity and socio-economic challenges.Further, it aims at understanding the diversity and its implications for the business.

Unit 1 Recognizing, Accommodating and valuing diversity
Challenges and dilemmas posed by diversity and drive for homogenization; Sources of dilemma and tension—immigration, competition for limited resources;

- Regional bases of India's diversity: regional approach to understanding diversity in terms of India's topography, drainage, soil, climate, natural vegetation, rural and urban settlements
- Social diversity in India: Peopling , demography, languages, castes, ethnicity, religions, sects, family, kinship and social institutions; socio-cultural regions

Unit 2 People, Livelihood and Occupational Diversity

• Traditional livelihoods and their nature - agriculture, crafts, industry and services;

- Region, occupation and employment
- Unit 3 Linkages between Diversity and India's Socio-economic challenges
- Regional variations in terms of geographic and socio-ec onomic factors- trends and emerging options;
- Food insecurity, economic inequalities and poverty, environmental degradation and sustainable development; Unit 4 Diversity and Business

- •Indian Consumers and marketing; Rural and Urban context
- •Diversity, manufacturing, industry and services;
- •Diversity and Innovation;
- •Workforce diversity and management

References:

Bhatt, B. L(1980)-" India and Indian Regions: A Critical Overview" in David E. Sopher 'An Exploration of India-Geographical Perspectives on Society and Culture'. Cornell. Pages- 35-61 for Socio cultural regions.
Bill Aitken, Seven sacred rivers, Penguin Books, 1992
Bose NK (1969) Unity in Indian Diversity in Desai AR (1969) Rural Sociology in India,reprinted 2009, Popular Prak ashan, (for diversity as strength Part II chap 3 pp 134-136)
Chakravarti AK (2004) Regional Preferences for F ood: Some Aspects of Food Habit Patterns In Indiain Grover N and KN Singh (eds) 2004,Cultural Geography: Form and Process , Concept Publishers, Delhi (for regional specificity of food -Chap 23 pp 355 to 375)

•Gadgil and Guha Ecology and Equity: The use and abuse of nature in contemporary India. Penguin 1995
•Gail Robinson and Kathleen Dechant, Building a business case for diversity, Academy of Management Executive 1997, Vol 11, No. 3
•Kaul, Vijay Kumar, 'Innovation Revolution: Harnessing India's Diversity' Yojana, November 2014, also available at SSRN , http://ssrn.com/abstract=2517855
•Kaul, Vijay Kumar, INDIA'S DIVERSITY AND GLOBALISATION: UNIFYING FORCES AND INNOVATION, Working paper in Social Sciences Research Network(SSRN) ,June 2014 http://ssrn.com/abstract=2444668
•Kaul, Vijay Kumar, INDIA'S DIVERSITY: FROM CONFLICT TO INNOVATION, Working paper in Social

Sciences Research Network(SSRN) ,June 2014 http://ssrn.com/abstract=2444099

•Kaul, Vijay Kumar, Managing Diversity, in Business Organisation and Management, chapter 35, Pearson Education, 2012.

•Nehru J (1946) The Discovery of India, OUP, chaps 4-8

•Sopher, D.E-"The Geographical Patterning of Culture of India" in David E. Sopher 'An Exploration of India- Geographical

Perspectives on Society and

Culture'. Cornell, Pages- 289-326.

•Thomas Kochan, KaterinaBezrukova, Robin Ely, et el,

The EFFECTS OF DIVERSITY ON BUSINESS

PERFORMANCE: REPORT OF THE DIVERSITY

RESEARCH NETWORK, Human Resource Management, Spring 2003, Vol 42, No.1. pp3-21

BBAA405SE2 STATISTICAL SOFTWARE

Credits -4

Marks-100

Objective: familiarise students with a statistical package for data analysis related to the Statistics and Market Research papers and which will also help in the Research Project. Any user friendly statistical package depending on resources available at each institution can be used. For example SPSS, PSPP (opensource)/ or any other equivalent. Some of the statistical analysis functions are also available in add in tools in Excel.

Course contents:

 Introduction- Data Entry, Storing and Retrieving Files, Statistics Menus, Generating New Variables
 Running Statistical Procedures – data entry and interpretation of the output Descriptive Statistics
 T-tests
 Chi Square test
 One way Anova
 Correlation
 Linear regression including multiple regression
 Cluster analysis
 Discriminant Analysis
 Factor analysis/Principal Components Analysis

BBAA405SE2 E-COMMERCE

Credits -4

Marks-100

Course contents:

Introduction to ecommerce: Meaning and concept of ecommerce, ecommerce vs e-business, advantages and disadvantages of ecommerce, value chain in ecommerce,

Porter's value chain model, competitive advantage and competitive strategy, different types of ecommerce like B2B, B2C, C2C,

C2B,G2C Technology in ecommerce: An overview of the internet,

basic network architecture and the layered model, internet

architecture, network hardware and software considerations,

intranets and extranets ,The making of world wide web, web system architecture, ISP, URL's and HTTP, cookies.

Building and hosting your website: choosing an ISP, registering a domain name, web promotion, internet marketing techniques, e-cycle of internet marketing, personalization,

mobile agents, tracking customers, customer service, CRM and e-value

Web page design using HTML and CSS: Overview of HTML, basic structure of an HTML document, basic text formatting, links, images, tables, frames, form and introduction to CSS

introduction to CSS.

Security threats: Security in cyberspace, kinds of threats and crimes: client threat, communication channel threat, server thre at, other programming threats, frauds and scams Basic cryptography for enabling security in ecommerce: en cryption: public and private key encryption, authentication and trust using digital signature and digital certificates, internet security using VPN, firewalls, SSL Internet payment systems: Features of payment methods, 4C payment methods, electronic money, ACID and ICES test, payment gateway, SET protocol for credit card payment, electronic payment media: ecash and e-wallet, e-check, credit card, debit card, smart card, EFT and ACH Business to Business e-commerce: Meaning, benefits and opportunities in B2B, B2B building blocks and their relationship to supply chain management, key B2B models and their main functions, EDI as a B2B tool.

Consumer oriented e-commerce: traditional retailing and eretailing, benefits and key success factors for e-retailing, models for e-retailing like specialized and generalized e-stores, e-mall, direct selling by manufacturer, supplementary distribution channel, ebroker and e-services like web-enabling services, matchmaking services, information selling on the web, entertainment services and auction services.

E-core values: ethical issues, legal issues, taxation issues and international issues.

BBAA405SE2 Summer Internship(Credits -4, Marks-100

BBAA501C11QUANTITATIVE TECHNIQUES FOR MANAGEMENT
Credits -6Marks-100

Objective:

To acquaint students with the construction of mathematical models for managerial decision situations and to use computer software packages to obtain a solution wherever applicable. The emphasis is on understanding the concepts, formulation and interpretation.

Course contents:

Unit 1:

Linear Programming: Formulation of L.P. Problems, Graphical Solutions (Special cases: Multiple optimal solution, infeasibility, unbounded solution); Simplex Methods (Special cases: Multiple optimal solution, infeasibility, degeneracy, unbounded solution) Big-M method and Two-phase method; Duality and Sensitivity (emphasis on formulation & economic interpretation); Formulation of Integer programming, Zero-one programming, Goal Programming.

Unit 2:

Elementary Transportation: Formulation of Transport Problem, Solution by N.W. Corner Rule, Least Cost method, Vogel's Approximation Method (VAM), Modified Distribution Method. (Special cases: Multiple Solutions, Maximization case, Unbalanced case, prohibited routes) Elementary Assignment: Hungarian Method, (Special cases: Multiple Solutions, Maximization case, Unbalanced case, Restrictions on assignment.) Unit 3: Network Analysis: Construction of the Network diagram, Critical Path- float and slack analysis (Total float, free float, independent float), PERT, Project Time Crashing Unit 4:

Decision Theory: Pay off Table, Opportunity Loss Table, Expected Monetary Value, Expected Opportunity Loss, Expected Value of Perfect Information and Sample Information Markov Chains: Predicting Future Market Shares, Equilibrium Conditions(Questions based on Markov analysis) Limiting probabilities, Chapman Kolmogrov equation. Introduction to Game Theory: Pay off Matrix- Two person Zero-Sum game, Pure strategy, Saddle point; Dominance Rule, Mixed strategy, Reduction of m x n game and solution of 2x2, 2 x s, and r x 2 cases by Graphical and Algebraic methods; Introduction to Simulation: Monte Carlo Simulation Readings:

1. N. D. Vohra: Quantitative Management, Tata McGraw Hill

2. P. K. Gupta, Man Mohan, Kanti Swarup: Operations Research, Sultan Chand.

3. V. K. Kapoor: Operations Research, Sultan Chand & Sons.

4. J. K. Sharma: Operations Research Theory & Applications, Macmillan India Limited.

BBAA502C12. LEGAL ASPECTS OF BUSINESS

Credits -6

Marks-100

Objective:

To gain knowledge of the business and corporate law which relate to business corporate bodies and related organisations. Also, to understand the applications of these laws to practical situations.

Course contents:

Unit 1:

The Indian Contract Act 1872: Meaning and Essentials of contract; Kinds of contract- Based on: validity, formation & performance, law relating to offer and acceptance, consideration, competency to contract, free consent, Void agreements, performance of contracts, discharge of contracts, breach of contracts and quasi contract, Special contracts: contract of indemnity and guarantee, bailment and pledge, and agency.

Unit 2:

Sale of Goods Act 1930: Sale and agreement to sell, implied conditions and warranties, sale by non-owners, rights

of unpaid seller. Negotiable Instruments Act 1881: Meaning of negotiable instruments, type of negotiable instruments, promissory note, bill of exchange, cheque.

Unit 3:

The Companies Act 2013: Meaning and types, Incorporation,

Memorandum & Articles of association, Prospectus, Issue of shares and bonus shares, rights issue, sweat equity, role of

directors, share qualification, company meetings.

The Limited Liability Partnership Act 2008: Meaning and nature of limited partnership, formation, partners & their relations, extent and limitation of liability.

Unit 4:

Consumer Protection Act 1986: Objectives and machinery for consumer protection, defects and deficiency removal, rights of consumers.

The Right to Information Act 2005: Salient features and coverage of the act, definition of terms information, right, record, public authority; obligations of public authorities, requesting information and functions of PIO.

Readings:

1.M.C.Kucchal: Business Law/Mercantile Law, Vikas Publishing.House (P) Ltd.

2.M.C.Kucchal, & Vivek Kucchal: Business Legislation for Management, Vikas Publishing House (P) Ltd.

3.Dr. G. K. Kapoor & Sanjay Dhamija: Company Law and Practice-A comprehensive textbook on Companies Act 2013, latest edition, Taxmann.

4.Gulshan Kapoor: Business Law, New Age International Pvt Ltd Publishers.

5. N. D. Kapoor: Mercantile Law, Sultan Chand Publications.

BBAA503DSE1ASTRATEGIC CORPORATE FINANCECredits -6Marks-100

Objective: The objective of this paper is to know the details of corporate finance and the strategies involved in the corporate decisions. It will enable the students to steer the corporate in better manner.

Course Contents:

UNIT-1

Introduction to strategic corporate finance: Strategy Vs Planning, significance of strategy in financial decisions, Different types of financial strategy for Shareholders Wealth Maximization, overall corporate value addition and Economic Value Addition. Strategic Cost Management: Traditional costing Vs Strategic Costing, Relevant costs Vs Irrelevant costs, Different types of strategic costing and their relevance- Target Costing, Activity based Costing, Life Cycle Costing, Quality Costing, Zero Based Budgeting, Strategic cost reduction techniques and value chain analysis.

UNIT-2

Management Buy-outs: Establishing feasibility of the buy-out, Negotiating the main terms of the transaction with the vendor including price and structure, Developing the business plan and financial forecasts in conjunction with the buy-out team for submission to potential funders, negotiations with potential funders so that the most appropriate funding offers are selected. Management Buy-ins: Management Buy-in/Buy-outs ("BIMBOs"), Vendorinitiated buy-outs/buy-ins. Valuing Real assets in the presence of risk: tracking portfolios and Real Asset valuation, Different Approaches of Valuing Real Assets, Capital Budgeting and Strategic policy Real options: Financial and real options compared, various types of real options, Introduction to the Black-Scholes model, Decision tree analysis,

UNIT-3

Financial Distress and restructuring: Meaning of Bankruptcy, Factors leading to bankruptcy, symptoms and predictions of bankruptcy, reorganization of distressed firms, liquidation of firms.Company disposals: retirement sale or the sale of a noncore subsidiary, planned exit, forceful retirement and other disposals. Exit strategymost appropriate exit route, valuation, timing of sale and tax planning opportunities, identification of potential purchasers, approaching the potential purchaser, negotiate with potential acquirers and selection of a preferred purchaser, calculation of the various tax implications. Fundraising: identification of different sources of development capital, determination of capital structure and factors affecting the capital structure, cost of capital and cost saving strategy, production of a business plan and financial forecasts to enable potential funders to assess the proposition.

UNIT-4

Company Valuation: an overview of valuation, valuation principles and practices more, the impact of "what if" scenarios, the key financial and commercial factors affecting the business. Value enhancement tools & techniques, the link between valuation and corporate finance. Strategic issues: managing credit ratings, and setting dividend and share repurchase policy, cash management. The issues of stock liquidity and illiquidity,

Strategic risk management, the substitutability of capital structure and risk management choices, such as process control efforts, financial, physical, and operational hedging, value-based management.

Text Books:

- 1. Aswath Damodaran: Corporate finance theory and practice; John willey sons, Inc
- 2. 2. Jakhotia: Strategic Financial Management (Vikas Publication)

BBAA503DSE2A CONSUMER BEHAVIOR

Credits -6

Marks-100

Objective:

The course of Consumer behaviour equips students with the basic knowledge about the issues and dimensions of consumer behaviour and with the skill and ability to analyse consumer information and develop consumer behaviour oriented marketing strategies.

Course contents:

Unit 1

Consumer Behaviour: Nature, scope & application: Importance of consumer behaviour in marketing decisions, characteristics of consumer behaviour, role of consumer research, consumer behaviour- interdisciplinary approach. Introduction to 'Industrial Buying Behaviour' Market Segmentation: VALS 2 segmentation profile. Unit 2

Consumer Needs & Motivation: Characteristics of motivation, arousal of motives, theories of needs & motivation: Maslow's hierarchy of needs, McLelland's APA theory, Murray's list of psychogenic needs, Bayton's classification of motives, self-concept & its importance, types of involvement.

Personality & Consumer Behaviour: Importance of personality, theories of personality Freudian theory, Jungian theory, Neo-Freudian theory, Trait theory: Theory of self images; Role of self-consciousness.

Consumer Perception: Concept of absolute threshold limit, differential threshold limit & subliminal perception: Perceptual Process: selection, organisation& interpretation. Learning & Consumer Involvement: Importance of learning on consumer behaviour, learning theories: classical conditioning, instrumental conditioning, cognitive learning & involvement theory.

Consumer Attitudes: Formation of attitudes, functions performed by attitudes, models of attitudes: Tri-component model, multi-attribute model, attitude towards advertisement model: attribution theory.

Unit 3

Group Dynamics & consumer reference groups: Different types of reference groups, factors affecting reference group influence, reference group influence on products & brands, application of reference groups.

Family & Consumer Behaviour: Consumer socialisation process, consumer roles within a family, purchase influences and role played by children, family life cycle. Social Class &

Consumer behaviour: Determinants of social class, measuring & characteristics of social class.

Culture & Consumer Behaviour: Characteristics of culture, core values held by society & their influence on consumer behaviour, introduction to sub-cultural & cross-cultural influences.

Opinion Leadership Process: Characteristics & needs of opinion leaders & opinion receivers, interpersonal flow of communication.

Unit 4

Diffusion of Innovation: Definition of innovation, product characteristics influencing diffusion, resistance to innovation, adoption process

Consumer Decision making process: Process- problem recognition, pre-purchase search influences, information evaluation, purchase decision (compensatory decision rule, conjunctive decision, rule, Lexicographic rule, affect referral, disjunctive rule), postpurchase evaluation; Situational Influences

Models of Consumer Decision making: Nicosia Model, Howard-Sheth Model, Howard Sheth Family Decision Making Model, Engel, Kollat& Blackwell Model, Sheth Newman Gross Model of Consumer Values.

NOTE: Cases & application to marketing will be taught with respect to each topic.

Readings

1. Leon G.Schiffman & Leslie L.Kanuk: Consumer Behaviour, Prentice Hall Publication, latest Edition

2. Solomon, M.R.: Consumer Behaviour – Buying, Having, and Being, Pearson Prentice Hall.

3. Blackwell, R.D., Miniard, P.W., & Engel, J. F.: Consumer Behaviour, Cengage Learning.

4. Hawkins, D.I., Best, R. J., Coney, K.A., & Mookerjee, A: Consumer Behaviour – Building Marketing Strategy, Tata McGraw Hill.

5. Kotler, P. & Keller, K. L.: Marketing Management (Global Edition) Pearson.

BBAA503DSE3A HRD: SYSTEMS AND STRATEGIES Credits -6 Marks-100

Objective:

The course gives an overview of the need for HRD and HRD practices which can develop and improve an Organization's systems and strategies leading to an optimal HRD climate.

Course Contents

UNIT - 1:

Human Resource Development (HRD) : Concept, Origin and Need, Relationship between human resource management and human resource development; HRD as a Total System; Activity Areas of HRD : Training, Education and Development; Roles and competencies of HRD professionals, talent management and talent acquisition. UNIT - 2:

HRD Process: Assessing need for HRD; Designing and developing effective HRD programs; Implementing HRD programs; Evaluating HRD programs.

UNIT- 3:

HRD Interventions: Integrated Human Resource Development Systems, Staffing for HRD; Physical and Financial Resources for HRD. HRD and diversity management; HRD Climate.

UNIT -4:

HRD Applications: Coaching and mentoring, Career management and development; Employee counselling; Competency mapping, High Performance Work Systems, HR Score Card. Integrating HRD with technology.

UNIT – 5:

Evaluating the HRD Effort; Data Gathering; Analysis and Feedback.

Readings:

1. Rao T.V. and Pareek, Udai: Designing and Managing Human Resource Systems, Oxford and IBH Publication Ltd.

2. Rao T.V.: Reading in human Resource Development, Oxford IBH Publication .Ltd.

3. Haldar, U. K.: Human resource development, Oxford University Press India.

BBAA503DSE4A INTERNATIONAL TRADE: POLICIES AND STRATEGIES Credits -6 Marks-100

Objective:

The paper aims to provide a thorough understanding of the basis for international trade and strategies. The role of the global institutional structure and trade strategies of developing countries and trade partners of India will be studied.

Course Contents:

Unit 1:

Review of Economic Theory on International Trade: Basis for international trade; gains from trade; distributional issues, policy instruments and their impact, political economy. Trends in Global Trade and Balance of Payments with special reference to India: Historical roots of today's international trade, Composition, origin and destination of global exports and imports, Trade in invisibles, Balance of payments: current account and capital account, Capital flows and foreign exchange revenues, External Debt Unit 2:

The Global Institutional Structure: GATT (General Agreement on Trade and Tariffs), WTO (World Trade Organisation), Regional Trade Blocks and Trade Agreements. Unit 3:

India's Industrialization Strategy and International Trade: Review of Economic planning strategies and issues: early phase; the 1970s and 1980, Policies since 1991, Exim policy, structure of tariffs and restrictions, currency depreciation and convertibility, Export Promotion Zones

Unit 4:

Experience of Select Developing Countries: Analysis of the trade strategy and the policy framework in two select large countries and comparison with India, Impact of trade on growth, agriculture, inequality, poverty, and other developmental indicators Case Studies on Trade Strategies of Emerging Economies- China and ASEAN (Association of South East Asian Nations).

Text Books:

 Tendulkar and Srinivasan: Reintegrating India with the World Economy, Pearson.
 Connor, David E. O' (2006). Encyclopedia of the Global Economy: A guide for students and researchers. New Delhi: Academic Foundation

References:

1. The Trade Game: Negotiation trends at WTO and concerns of developing countries, 2006. New Delhi : Academic Foundation

2. Krugman, Obstfeld and Melitz: International Economics. (8th ed.). Pearson Education

3. <u>www.wto.org</u>

BBAA504DSE1B INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

Credits -6

Marks-100

Objective:

The aim of this course is to provide a conceptual framework for analysis from an investor's perspective of maximizing return on investment – a sound theoretical base with examples and references related to the Indian financial system. Course Contents:

Unit 1

Basics of risk and return: concept of returns, application of standard deviation, coefficient of variation, beta, alpha. Bonds : present value of a bond, yield to maturity, yield to call, yield to put, systematic risk, price risk, interest rate risk, default risk. Yield curve and theories regarding shape of yield curve. Duration and modified duration, immunization of a bond portfolio. Fundamental analysis: EIC framework; Economic analysis: Leading lagging & coincident macro-economic indicators, Expected direction of movement of stock prices with macroeconomic variables in the Indian context; Industry analysis: stages of life cycle, Porter's five forces model, SWOT analysis, financial analysis of an industry; Company analysis. (with simple sums).

Unit 2

Share valuation: Dividend discount models- no growth, constant growth, two stage growth model, multiple stages; Relative valuation models using P/E ratio, book value to market value. Technical analysis: meaning, assumptions, difference between technical and fundamental analysis; Price indicators- Dow theory, advances and declines, Relative Strength Analysis, other indicators- futures, institutional activity, Trends: resistance,

support, consolidation, momentum- Charts: line chart, bar chart, candle chart, point & figure chart. Indicators: moving averages. Efficient market hypothesis; Concept of efficiency: Random walk, Three forms of EMH and implications for investment decisions. (No numericals in EMH and technical analysis)

Unit 3

Unit III Portfolio analysis: portfolio risk and return, Markowitz portfolio model: risk and return for 2 and 3 asset portfolios, concept of efficient frontier & optimum portfolio. Market Model: concept of beta systematic and unsystematic risk. Investor risk and return preferences: Indifference curves and the efficient frontier, Traditional portfolio management for individuals: Objectives, constraints, time horizon, current wealth, tax considerations, liquidity requirements, and anticipated inflation, Asset allocation: Asset allocation pyramid, investor life cycle approach, Portfolio management services:

Unit 4

Capital asset pricing model (CAPM): Efficient frontier with a combination of risky and risk free assets. Assumptions of single period classical CAPM model. Characteristic line, Capital Market Line, Security market Line. Expected return, required return, overvalued and undervalued assets. Mutual Funds :Introduction, calculation of Net Asset Value (NAV) of a Fund, classification of mutual fund schemes by structure and objective, advantages and disadvantages of investing through mutual funds. Performance Evaluation using Sharpe's Treynor's and Jensen's measures.

References:

1. Fischer, D.E. & Jordan, R.J.: Security Analysis & Portfolio Management, Pearson Education.

2. Sharpe, W.F., Alexander, G.J. & Bailey, J.: Investments, Prentice Hall of India. 3. Singh,R: Security Analysis & Portfolio Management . Excel Books.

4. Frank K Reilly & Keith C Brown: Investment Analysis and Portfolio Management, Cenage India Pvt. Ltd.

BBAA504DSE2B ADVERTISING AND BRAND MANAGEMENT Credits -6 Marks-100

Objective:

To equip the students with the nature, purpose & complex constructions in the planning and execution of a successful advertising program. The course will expose student to issues in brand management, faced by firms operating in competitive markets.

Course Contents:

Unit 1

Advertising need & importance: Definition & growth of modern advertising, advertising & the marketing mix, types & classification of advertisement, advertising spiral; Social & economic aspects of advertising; Marketing communication models: AIDA, hierarchy of

effect, innovation adoption model, action first model, quick decision model; Planning framework of promotional strategy

Unit 2

How advertising works: Exposure, salience, familiarity, low involvement, central route & peripheral route & cognitive learning; Positioning strategies ; Associating feelings with a brand; Developing brand personality ; Creating copy strategies: Rational & emotional approaches, selection of an endorser, creative strategy & style- brand image, execution, USP, common touch & entertainment, message design strategy, format & formulae for presentation of appeals (slice of life, testimonials, etc.), different types of copy; Art & layout of an advertisement: Principles of design, layout stages, difference in designing of television, audio & print advertisement

Unit 3

Media planning & scheduling: Introduction to broadcast & non -broadcast media; Budgeting decision rule: percentage of sales method, objective to task method, competitive parity, & all you can afford; Key factors influencing media planning; Media decisions: media class, media vehicle & media option; Scheduling: flighting, pulsing, & continuous.

Unit4

Management of sales promotion: Importance & need for sales promotion, planning for consumer schemes & contests, different types of consumer schemes.

Unit 5

Introduction to brands and brand management, Concept of a brand, brand evolution, branding challenges and opportunities, Strategic brand management process. Unit 6

Identifying and establishing brand positioning and values; Brand building, brand positioning and values brand repositioning. Unit VII Designing and implementing brand strategies; Brand extension. Brand hierarchy Kapfrer. Brand equity, brand personality, brand image, managing brands overtime. Integrating advertising and brand management Note: Applied cases would be taken up in class.

Readings:

1. Aaker, Myers & Batra : Advertising Management , Prentice Hall.

2. Wells, Moriarity & Burnett : Advertising Principles & practices , Prentice Hall.

3. Kleppner's Advertising Procedure: W.Ronald Lane, kane Whitehill king and J. Thomas Russell, Pearson Education.

4. George E.Belch& Michael A. Balch : Advertising and Promotion, TMH

5. S.H.H Kazmi and SatishK.Batra : Advertising and sales promotion, Excel books 6.

Cowley. D: Understanding Brands, , Kogan Page Ltd

7. Jean Noel Kampferer: Strategic Brand Management, Kapferer Free Press

8. David Aaker: Brand Leadership, Simon & Schuster

9. Wright, Winter, Ziegler: Advertising, Atlantic Publishers & Dist.

10. Sandage, Fryburger,: Advertising Theory & Practice, Ratroll Longman Group

BBAA504DSE3B MANAGEMENT OF INDUSTRIAL RELATIONS Credits -6 Marks-100

Objective:

To acquaint students with concepts of Industrial Relations and various legislations related to Labour Welfare and Industrial Relations.

Course Contents:

Unit 1

Concept of industrial relations, aspects of industrial relations, conflict and cooperation, parties in industrial relations, workers employers and government, trade unions, objectives collective bargaining.

Unit 2

Workers participation in management, levels of participation, mode of participation Works Committee, Joint Management councils, Worker Director, Grievance Procedure, Quality Circles.

Unit 3

Trade Union Act 1926, Immunity granted to Registered Trade Unions, Recognition of Trade Unions. The Industrial Employment (Standing Orders) Act 1946, scope, coverage, certification process, modification, interpretation, and enforcement. The Industrial Disputes Act 1947, forum for settlement of disputes, instruments of economic coercion, strikes, lockouts and closure.

Unit 4.

Salient features, coverage of employees and employers, rules and benefits relating to The Payment of Wages Act 1936, The Payment of Gratuity Act 1972, The Minimum Wages Act 1948, and The Payment of Bonus Act 1965.

Unit 5

The Factories Act 1948, definition, approval, licensing and registration, health and welfare measures ,employment of women and young persons ,leave with wages and weekly holidays.

Unit 6

The salient features ,coverage of employees and employers, and benefits under The Provident Fund and Miscellaneous Provisions Act 1952 and Employees Pension Scheme and Employees State Insurance Act 1948.

References:

1. S C Srivastava: Industrial Relations and Labour Laws, Vikas Publishing House.

2. 2. T N Chhabra: Industrial Relations and Labour Laws, Dhanpat Rai Publishing House.

BBAA504DSE4B GLOBAL BUSINESS ENVIRONMENT Credits -6 Marks-100

Objective:

To get the students acquainted with the present economic environment in India and abroad. To enable the students understand the various issues involved in the macro management of the economy

Course Contents:

Unit 1:

Introduction.Concept of Economic Environment; Nature and scope. Macro variables: Income, Employment, Money Supply, Price Level, Interest rates, Saving and Investment. Movement and Interrelationship between different variables. Trends in Macro variables in India

Unit 2:

Institutional Framework of Economic Environment: Role of state; State Vs Markets. Fiscal Policy; Concept & Implications. Monetary Policy; Concept &Implications. Commercial Policy; Concept & Implications

Unit 3:

Structure of Indian Economy: Growth Strategy in plans. Industrial Policy. Public sector & Private sector Monetary Policy. Fiscal Policy. Infrastructure Development. Issues in Indian Economy: Poverty, Unemployment, Regional Dimensions, Productivity & Modernisation, Environment& Sustainable Development, Human Resource Development.

Unit 4:

Open Economy Management. Balance of payments. Role of Foreign Trade & Policy. Role of Foreign Capital & Policy. Exchange Rate Policy and Exchange Controls. External Debt; International Linkages: Globalisation: Concept, Implications, Policy. Regional Integration: EU, etc. World Trade Organization.World Bank, IMF, etc. Other Emerging Economies: China, Brazil,Russia. Global Orientation of Indian Economy: Growth and evolution of Indian MNC's, Current crises in US/Europe/Asia and its impact on economic growth of India. SAARC, ASEAN and India.

Text Books:

1. The Indian Economy; Problems and Prospects. Edited by BimalJalan, Penguin 2. V.K.Puri: Indian Economy, Himalya Publishing House

BBAA601C13. BUSINESS POLICY AND STRATEGY Credits -6

Marks-100

Objective:

To equip students with the necessary inside into designing strategies for an organisation and linking the organisations strategies with the changing environment. The course will focus on Indian cases, approaches and experiences.

Course contents:

Unit 1:

Nature & importance of business policy & strategy: Introduction to the strategic management process and related concepts; Characteristics of corporate, business & functional level strategic management decisions. Company's vision and mission: a mission statement, goal, objective, policy, procedure and process.

Unit 2:

Environmental Analysis & Diagnosis: Michael E. Porter's 5 Forcesmodel; Internal analysis: Importance of organisation's capabilities, competitive advantage and core competence, Michael E. Porter's Value Chain Analysis, SWOT, PESTEL. Unit 3:

Formulation of competitive strategies: Michael E. Porter's generic competitive strategies, implementing competitive strategies-

offensive & defensive moves. Formulating Corporate Strategies: Introduction to strategiesof growth, stability and renewal, Types of growth strategies – concentrated growth, product development, integration, diversification, international expansion (multi domestic approach, franchising, licensing and joint ventures), Types of renewal strategies – retrenchment and turnaround. Strategic fundamentals of

merger & acquisitions, insolvency and Banker's code.

Unit 4:

Strategic Framework: Strategic analysis & choice, Strategic gap analyses, portfolio analyses – BCG, GE, product market evolution matrix, experience curve, directional policy matrix, life cycle portfolio matrix, grand strategy selection matrix; functional strategies & their link with business level strategies. Balanced Score Card; Introduction to Strategic control & evaluation, Strategic surveillance.

Readings:

1.J.A. Pearce & R.B. Robinson : Strategic Management formulation implementation and control, TMH

2.Arthur A. Thompson Jr. & A.J Strickland III : Crafting and executing strategy, TMH

3.Gerry Johnson & Kevan Scholes, Exploring corporate strategies, PHI

4.Lawrence R. Jauch & William F. Glueck: Business Policy and Strategic Management (Mcgraw Hill Series in Management).

5. Kazmi Azhar: Strategic Management and Business Policy, (Mcgraw Hill Series in Management).

6. Bhattacharya S. C.: Strategic Management: Concepts and cases, A. H. Wheeler Publishing Co. Ltd.

BBAA602C14 FINANCIAL INSTITUTIONS AND MARKETS Credits -6

Marks-100

Objective: The objective of this paper is to introduce students to the different aspects and components of financial Institutions and financial markets. This will enable them to take the rational decision in financial environment.

Course Content:

Unit I: Structure of Indian Financial System: An overview of the Indian financial system, financial sector reforms: context, need and objectives; major reforms in the last decade; competition; deregulation; capital requirements; issues in financial reforms and restructuring; future agenda of reforms; Regulation of Banks, NBFCs & FIs: Salient provisions of banking regulation act and RBI Act; Role of RBI as a central banker; Products offered by Banks and FIs: Retail banking and corporate banking products. Universal Banking: need, importance, trends and RBI guidelines, Core banking solution (CBS); RTGS and internet banking, NBFCs and its types; comparison between Banks and **NBFCs**

Unit II: Introduction to Financial Markets in India: Role and Importance of Financial Markets, Financial Markets: Money Market; Capital Market; Factors affecting Financial Markets, Linkages Between Economy and Financial Markets, Integration of Indian Financial Markets with Global Financial Markets, Primary & secondary market, Currency Market, Debt Market- role and functions of these markets. Primary Market for Corporate Securities in India: Issue of Corporate Securities: Public Issue through Prospectus, Green shoe option, Offer for sale, Private Placement, Rights Issue, On-Line IPO, Book Building of Shares, Disinvestment of PSU, Employees Stock Options, Preferential Issue of Shares, Venture Capital, Private Equity, Performance of Primary Market in India, Corporate Listings: Listing and Delisting of Corporate Stocks.

Unit III: Secondary Market in India: Introduction to Stock Markets, Regional and Modern Stock Exchanges, International Stock Exchanges, Demutualization of exchanges, Comparison between NSE and BSE, Raising of funds in International Markets: ADRs and GDRs, FCCB and Euro Issues; Indian Stock Indices and their construction, maintenance, adjustment for corporate actions (rights, bonus and stock split;) on index with numerical, free float vs. full float methodology, Classification of Securities to be included in the Index, Bulls and Bears in Stock Markets, Factors influencing the movement of stock markets, indicators of maturity of stock markets, Major Instruments traded in stock markets: Equity Shares, Debentures, Trading of securities on a stock exchange; Selection of broker, capital and margin requirements of a broker, MTM and VAR Margins, kinds of brokers, opening of an account to trade in securities, DEMAT System, placing an order for purchase/sale of shares, margin trading and margin adjustment, contract note and settlement of contracts, Algorithmic trading, Settlement mechanism at BSE & NSE

Unit IV: Money Markets & Debt Markets in India: Money Market: Meaning, role and participants in money markets, Segments of money markets, Call Money Markets, Repos and reverse Repo concepts, Treasury Bill Markets, Market for Commercial Paper, Commercial Bills and Certificate of Deposit. Role of STCI and DFHI in money market, Debt Market: Introduction and meaning, Market for Government/Debt Securities in India, Secondary market for government/debt securities, Over subscription and devolvement of Government Securities, Government securities issued by State Governments, Municipal Bonds, Corporate Bonds vs. Government Bonds **Readings:**

1. Saunders, Anthony & Cornett, Marcia Millon (2007). *Financial Markets and Institutions* (3rd ed.). Tata McGraw Hill

2. Khan, M Y. (2010). Financial Services (5th ed.). McGraw Hill Higher Education

3. Shahani, Rakesh(2011). *Financial Markets in India: A Research Initiative*. Anamica Publications

4. Goel, Sandeep. (2012). Financial services. PHI.

5. Gurusamy, S. (2010). Financial Services. TMH.

BBAA603DSE1CINVESTMENT BANKING AND FINANCIAL SERVICESCredits -6Marks-100

Objective:

The objective of this paper is to know the different aspects of Investment banking, mergers and acquisition and the detailed SEBI guidelines on issue management.

Course Contents:

UNIT-1

Introduction: An Overview of Indian Financial System, Investment Banking in India, Recent Developments and Challenges ahead, Institutional structure and Functions of Investment / Merchant Banking; SEBI guidelines for Merchant Bankers, Registration, obligations and responsibilities of Lead Managers, Regulations regarding Continuance of association of lead manager with an issue

UNIT 2

Issue Management: Public Issue: classification of companies, eligibility, issue pricing, promoter's contribution, minimum public offer, prospectus, allotment, preferential allotment, private placement, Book Building process, designing and pricing, Green Shoe Option; Right Issue: promoter's contribution, minimum subscription, advertisements, contents of offer document, Bought out Deals, Post issue work & obligations, Investor protection, Broker, sub broker and underwriters UNIT 3

Leasing and Hire Purchase :Concepts of leasing, types of leasing – financial & operating lease, direct lease and sales & lease back, advantages and limitations of leasing, Lease rental determination; Finance lease evaluation problems (only Lessee's angle), Hire Purchase interest &Installment, difference between Hire Purchase & Leasing, Choice criteria between Leasing and Hire Purchase mathematics of HP, Factoring, forfaiting and its arrangement, Housing Finance : Meaning and rise of housing finance in India, Fixing the amount of loan, repricing of a loan, floating vs. fixed rate, Practical problems on housing finance.

UNIT 4

Venture Capital: Concept, history and evolution of VC, the venture investment process, various steps in venture financing, incubation financing. Insurance: concept, classification, principles of insurance, IRDA and different regulatory norms, operation of General Insurance, Health Insurance, Life Insurance. Credit Ratings: Introduction, types of credit rating, advantages and disadvantages of credit ratings, Credit rating agencies and their methodology, International credit rating practices. Securitization: concept, securitization as a funding mechanism, Traditional and nontraditional mortgages,

Graduated-payment mortgages (GPMs), Pledged-Account Mortgages (PAMs), Centralized Mortgage obligations (CMOs) (Only Concepts)

REFERENCES

1. M.Y.Khan: Financial Services, Tata McGraw –Hill. 2. Machiraju: Indian Financial System, Vikas Publishing House

- 2. Machiraju: Indian Financial System, Vikas Publishing House.
- 3. J.C.Verma: A Manual of Merchant Banking, Bharath Publishing House.
- 4. 4. K.Sriram: Hand Book of Leasing, Hire Purchase & Factoring, ICFAI, Hyderabad.
- 5. 5. Ennew.C.Trevor Watkins & Mike Wright: Marketing of Financial Services,

Heinemann Professional.

BBAA603DSE2C MARKETING OF SERVICES

Credits -6

Marks-100

Objective: The course is designed to equip students with the knowledge of marketing of all types of services.

Course Contents:

Unit 1:

The emergence of service economy: contributory factors, consumption pattern analysis, economic transformation unique aspects of services: goods, services, products, managerial challenges

Unit 2:

Marketing mix: concept of value and value drivers, extended framework Service marketing system: production, marketing, human resources, sequential analysis. Unit 3: Service system positioning: service delivery process, blueprinting Service buying behaviour; difference in perspective, risk analysis, decision process. Unit 4:

Service marketing strategy; segmentation, targeting and positioning, market innovation Competitive differentiation; competitive advantage and value chain analysis Unit5 :

Service quality; concept, technical and functional quality, Service quality models and measurement Demand and supply imbalances management; challenges and strategies; Service culture; managing by values, recovery and empowerment; Relationship building: relationship marketing, bonding and life time value Service industries: insurance, banking, air transportation, courier, education etc.

Text Books:

1. Fisk, R. P., Grove, S. J., & John, J.: Interactive services marketing. New York. Houghton Mifflin.

2. Glynn, W. J., & Barnes, J. G.: Understanding services management - Integrating marketing, organizational behaviour, operations and human resources management, Prentice Hall.
References:

1. Gronroos, C.: Service Management and Marketing - A customer relationship management approach, New York: John Wiley.

2. Hoffman, K. D., & John, E. G. B.: Marketing of services: Concepts strategies and cases, Thomson-South Western.

3. Shanker, R. (2002). Services Marketing: The Indian perspective, Excel Books.

BBAA603DSE3CPERFORMANCE AND COMPENSATION MANAGEMENTCredits -6Marks-100

Objective:

To familiarize students about concepts of performance and compensation management and how to use them to face the challenges of attracting, retaining and motivating employees to high performance.

Course Contents

Unit 1

Introduction- Concept, Philosophy, History from performance appraisal to performance development. Objectives of performance management system Performance Management system, Performance Feedback and Counselling.

Unit 2

Performance management and reward systems. Coaching ,Mentoring and Counselling, Competency development, Use of technology and e-PMS, International Aspects of PMS. Performance systems trends, Ethical Perspectives in performance appraisal. Unit 3

Introduction to Job Evaluation. Methods of Job Evaluation. Company Wage Policy: Wage Determination, Pay Grades, Wage Surveys, Wage Components. Modern trends in compensation - from wage and salary to cost to company concept, Comparable worth, broad banding, competency based pay.

Unit 4

Incentives plans for production employees and for other professionals. Developing effective incentive plans, pay for performance,. Supplementary pay benefits, insurance benefits, retirement benefits, employee services benefits. Benefits & Incentive practices in indian industry.

Unit 5

Wages in India: Minimum wage, fair wage and living wage. Methods of state regulation of wages. Wage differentials & national wage policy Regulating payment of wages, wage boards, Pay commissions, dearness allowances, linking.

Readings:

1. Milkovich & Newman, Compensation, McGraw Hill.

2. Richard Henderson: Compensation management in a knowledge based world, Prentice Hall.

3. Gary Dessler, Human Resource Management, Prentice Hall.

4. Armstrong's Handbook of Performance Management: An Evidence-Based Guide to Delivering High Performance :Book by Michael Armstrong

5. Armstrong, M. & Baron, A: Performance management and development, Jaico Publishing House

6. Armstrong, M., Performance management: Key strategies and practical guidelines, Kogan Page, London.

7. Bhattacharyya, D.K.: Performance management systems and strategies, Pearson Education.

BBAA603DSE4C INTERNATIONAL JOINT VENTURES, MERGERS AND ACQUISITIONS

Credits -6

Marks-100

Objective:

This course is designed to provide an understanding of the essential elements of Joint Ventures, Mergers and Acquisitions with the basic methods of valuation, postmerger valuation, methods of payment and financing options at global level.

Course Contents:

Unit 1

Joint Ventures: Concept & Meaning of Joint Ventures, Need & Types of Joint Ventures, Structures & Problems faced in Joint Ventures, Joint Ventures and Strategic Alliance. Some relevant case study of successful and failed joined ventures. Unit 2.

Mergers and Acquisitions: Introduction to mergers, types of mergers, theories of mergers & acquisitions; Cross-border mergers and acquisitions, issues and challenges in cross border M&A. Handling cross-culture and taxations issues in cross-border M&A. Analysis of Post-Merger Performance. Demerger, types of demerger, reverse merger, buyback of shares, leverage buy-out strategy, merger strategy - growth, synergy, operating synergy, financial synergy, diversification. Takeover and its types, takeover strategy, takeover bids, legal framework for mergers and acquisitions, leverages and buyouts. Unit 3.

Deal Valuation and Evaluation: Factors affecting valuation basics, methods of valuation, cash flow approaches, economic value added (EVA), sensitivity analysis, valuation under takeover regulation, valuation for slump sale, cost-benefit analysis and swap ratio determination

Unit 4

Post-Merger Evaluation: Financial Evaluation of Mergers & Acquisitions, Impact on shareholders' Wealth; Methods of payment and financing options in mergers & acquisitions, financing decision, Merger, Acquisition and Competition law 2002, SEBI

(Securities & Exchange Board of India) Takeover Code 2011 and criteria for negotiating friendly takeover.

Readings

1. Weston, Fred; Chung, Kwang S. & Siu, Jon A.: Takeovers, Restructuring and Corporate Governance, (2nd ed.). Pearson Education

2. Gupta, Manju (2010): Contemporary Issues in Mergers and Acquisitions. Himalaya Publishing

3. Sundarsanam (2006); Creating Value from Mergers and Acquisitions, (1st ed.) Pearson Education

4. Ramanujan. S. (1999); Mergers: The New Dimensions for Corporate Restructuring, McGraw Hill

5. Narayankar, Ravi, (2013): Merger and Acquisitions Corporate Restructuring, Strategy and Practices, (2nd ed.). International Book House Pvt. Ltd.

BBAA604DSE1/2/3/4 Research Project (Credits 6, Marks 100)



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12/18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

S No	L. <u>Subject</u>	<u>_SI.</u> <u>No.</u>	Subject	
1	Anthropology (Honours/General)	29	Mathematics (Honours / General)	
2	Arabic (Honours / General)	30	Microbiology (Honours / General)	
3	Persian (Honours / General)	31	Mol. Biology (General)	
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)	
5	Bio-Chemistry (Honours / General)	33	Physical Education (General)	
6	Botany (Honours / General)	34	Physics (Honours / General)	
7	Chemistry (Honours / General)	35	Physiology (Honours / General)	
. 8	Computer Science (Honours / General)	36	Political Science (Honours / General)	
9	Defence Studies (General)	37	Psychology (Honours / General)	
* 10	Economics (Honours / General)	38	Sanskrit (Honours / General)	
1	Education (Honours / General)	39	Social Science (General)	
13	2 Electronics (Honours / General)	40	Sociology (Honours / General)	
13	B English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)	
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)	
1.5	5 Environmental Studies (AECC2)	43	Women Studies (General)	
16	5 Film Studies (General)	44	Zoology (Honours / General)	
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries - IFFV (Major)	
18	B French (General)	46	Sericulture - SRTV (Major)	
19	Geography (Honours / General)	47	Computer Applications - CMAV (Major)	
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)	
21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales Management – ASPV (Major)	
-22	History (Honours / General)	- 50	Communicative English -CMEV (Major)	
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Dietetics CNDV (Major)	
24	Home Science Extension Education (General)	52	Bachelor of Business Administration (BBA) (Honours)	
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design – (B.F.A.D.) (Honours)	
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)	
27	Human Rights (General)	55	B. Music (Honours / General) and Music (General)	
28	Journalism and Mass Communication (Honours / General)		·	

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar



UNIVERSITY OF CALCUTTA

SYLLABUS

of

Bachelor of Science (B. Sc.)

(Honours)

in

Computer Science (CMSA) Choice Based Credit System (CBCS) 2018

Syllabus for B.Sc. (Honours) in Computer Science (CMSA) with Choice Based Credit System (CBCS) for Semesters– I-VI from the Academic Session 2018-19

Courses	lopics	Credit
CMS-A-CC-1-1-TH	Digital Logic	4
(Core Course-1) Theory		
CMS-A-CC-1-1-P	Digital Circuits	2
(Core Course-1) Practical		
CMS-A-CC-1-2-TH	Programming Fundamentals using C	4
(Core Course-2) Theory		
CMS-A-CC-1-2-P	Programming in C	2
(Core Course-2) Practical		
	Courses CMS-A-CC-1-1-TH (Core Course-1) Theory CMS-A-CC-1-1-P (Core Course-1) Practical CMS-A-CC-1-2-TH (Core Course-2) Theory CMS-A-CC-1-2-P (Core Course-2) Practical	CoursesTopicsCMS-A-CC-1-1-TH (Core Course-1) TheoryDigital LogicCMS-A-CC-1-1-P (Core Course-1) PracticalDigital CircuitsCMS-A-CC-1-2-TH (Core Course-2) TheoryProgramming Fundamentals using CCMS-A-CC-1-2-P (Core Course-2) PracticalProgramming in C

SEMESTER – I

SEMESTER – I

CMS-A-CC-1-1-TH: Digital Logic

Core Course-1: Theory: 04 Credits: 60 hours

Integrated Circuits:

Bipolar Logic Families: DTL, TTL NOT Gate, TTL NAND Gate, TTL NOR Gate, Open Collector, Fan-in, Fan-out; MOS Logic Families: NMOS, PMOS, CMOS, SSI, MSI, LSI and VLSI classification

Number Systems:

Weighted and Non-Weighted Codes, positional, Binary, Octal, Hexadecimal, Binary coded Decimal (BCD), Gray Codes, Alphanumeric codes, ASCII, EBCDIC, Conversion of bases, Parity bits, Single Error bit detection and correcting codes: Hamming Codes, Fixed and Floating Point Arithmetic: Addition, Subtraction, Multiplication and Division.

Boolean Algebra:

Fundamentals of Boolean Expression: Definition of Switching Algebra, Basic properties of Switching Algebra, Huntington's Postulates, Basic logic gates (AND, OR, NOT), De-Morgan's Theorem, Universal Logic gates (NAND, NOR), Minterm, Maxterm, Minimization of Boolean Functions using K-Map up-to four variables, Two level and multilevel implementation using logic gates, Simplification of logic expression.

Combinational Circuits:

Half adders, Full Adder (3-bit), Half Subtractor, Full Subtractor (3-bit) and construction using Basic Logic Gates (OR, AND, NOT) and Universal Logic Gates (NAND & NOR), Multibit Adder- Ripple Carry Adder, Carry Look Ahead adder, BCD Adder, 1'S & 2'S Complement Adder/Subtractor unit Construction using 4 bit Full adders units, 1 bit, 2 bit, 3 bit and 4 bit Comparators using basic logic gates.

Data Selector-Multiplexer: Expansion (Cascading), Reduction, Function Realization, Universal function realization, Multifunction Realization.

(5 hours)

(8 hours)

(5 hours)

(20 hours)

Encoders:- Realization of simple Encoders and priority Encoders using Basic and Universal Logic gates

Data Distributor:- De-multiplexer, Cascading.

Chip Selector/Minterm Generator - Decoder- Function Realization, Cascading, BCD Decoders, Seven Segment Display and Decoders, realization of seven segment decoders using basic gates.

Parity bit and Code Converters: Parity bit Generator/Checker, Gray to Binary code converter, Binary to Gray Code Converter.

Sequential Circuits:

(22 hours)

Set/Reset (SR) Latch: Using NAND and NOR gates, Gated S-R latches, D Latch, J-K Latch, T Flip Flop, Race around Condition, Master Slave J-K Flip Flop, Clock - Duty Cycle, Rising Time, Falling Time, Negative Edge Detector and Positive Edge Detector circuits, Edge Triggered SR, D and JK Flip Flop, Flip-Flop Conversions, Flip-Flops with Preset and Clear.

Registers: Serial Input Serial Output, Serial Input Parallel Output, Parallel input Serial Output, Parallel Input parallel Output, Universal Shift Registers.

Counters: Asynchronous Counter: UP/DOWN Counters, Mod - N Counters, BCD Counter (Counter Construction using J-K and T Flip Flops).

Synchronous Counter: UP/DOWN Counters, Mod-N Counters, Ring Counters, Johnson Counters.

CMS-A-CC-1-1-P: Digital Circuits

Core Course-1: Practical: 02 Credits: 40 hours Combinational Circuits:

- 1. Implementation of different functions using Basic and Logic gates, SOP, POS
- 2. Study and prove De-Morgan's Theorem.
- **3.** Universal function using NAND and NOR gates
- **4.** Implementation of half and Full adder (3-bit) using basic logic gates and Universal logic gates (NAND & NOR).
- Implementation of half and Full Subtractor (3-bit) using basic logic gates and Universal logic gates (NAND & NOR).
- **6.** 1 Digit BCD adder using 7483 and other logic gates.
- 7. Design 4 to 1 multiplexer using logic/Universal gates and implement full adder/full subtractor.
- 8. Using 74153 and 74151 to implement full adder/ full subtractor and other functions.
- 9. Cascading of Multiplexers.
- **10.** Design 2 to 4 decoder using basic / universal logic gates.
- 11. Study 74138 and 74139 and implement full adder / full subtractor and other functions.
- **12.** Implementation of 1 bit Comparator using decoders.
- **13.** Cascading of Decoders.
- **14.** Design a parity generator and checker using basic gates.
- **15.** Construct and study comparators using 7485.
- **16.** Construct Comparator (2-bit) using logic gates
- 17. Design a seven segment display unit using Common anode/Common cathode and 7447 / 7448.
- **18.** Study Priority Encoder Chip 74147/74148.

Sequential Circuits:

1. Realization of RS, D, JK Clocked/Gated Level Triggered Flip-Flop using basic/Universal logic

gates.

- 2. Study and Conversion of Flip-Flops: D to JK, JK to D, JK to T, SR to JK, SR to D Flip-flop.
- 3. Design synchronous and asynchronous counters MOD-n (MOD-8, MOD-10) UP/ DOWN and connecting Seven Segment Display along with decoder for display of counting sequence.
- 4. Construction of ODD/EVEN 4 bit Synchronous Counter.
- 5. 4-bit binary arbitrary sequence synchronous counter.

Text/Reference Books

- 1. Digital Circuits, Vol I & II, D. Ray Chaudhuri, Platinum Publishers.
- 2. Digital Systems Principle & Applications, Tocci & Widmer, EEE.
- 3. Digital Logic & State Machine Design, Comer, Oxford.
- 4. Digital Principle & Applications, Malvino & Leach, McGraw Hill.
- 5. Digital Design, Mano, PHI.
- 6. Digital Integrated Electronics- H.Taub & D.Shilling, Mc Graw Hill.
- 7. Digital Circuits and Design, Salivahan, Vikas

CMS-A-CC-1-2-TH: Programming Fundamentals using C **Core Course-2: Theory: 04 Credits:** 60 hours

Introduction:

History, Basic Structure, Algorithms, Structured programming constructs.

C Programming elements:

Character sets, Keywords, Constants, Variables, Data Types, Operators- Arithmetic, Relational, Logical and Assignment; Increment and Decrement and Conditional, Operator Precedence and Associations; Expressions, type casting. Comments, Functions, Storage Classes, Bit manipulation, Input and output.

C Preprocessor:

File inclusion, Macro substitution.

Statements:

Assignment, Control statements- if, if else, switch, break, continue, goto, Loops-while, do while, for.

Functions:

Argument passing, return statement, return values and their types, recursion

Arrays:

String handling with arrays, String handling functions.

Pointers:

Definition and initialization, Pointer arithmetic, Pointers and arrays, String functions and manipulation, Dynamic storage allocation.

(6 hours)

(6 hours)

(6hours)

(4 hours)

(8 hours)

(7hours)

(10 hours)

User defined Data types:

(7 hours)

(6hours)

Enumerated data types, Structures. Structure arrays, Pointers to Functions and Structures, Unions

File Access:

Opening, Closing, I/O operations.

CMS-A-CC-1-2-P: Programming with C Core Course-2: Practical: 02 Credits: 40 hours

- **1.** WAP to print the sum and product of digits of an integer.
- **2.** WAP to reverse a number.
- **3.** WAP to compute the sum of the first n terms of the following series, S =1+1/2+1/3+1/4+...
- **4.** WAP to compute the sum of the first n terms of the following series, S = 1-2+3-4+5...
- **5.** Write a function that checks whether a given string is Palindrome or not. Use this function to find whether the string entered by user is Palindrome or not.
- **6.** Write a function to find whether a given no. is prime or not. Use the same to generate the prime numbers less than 100.
- 7. WAP to compute the factors of a given number.
- 8. Write a macro that swaps two numbers. WAP to use it.
- 9. WAP to print a triangle of stars as follows (take number of lines from user):

* *** ***** ****** *******

10. WAP to perform following actions on an array entered by the user :

- i) Print the even-valued elements
- ii) Print the odd-valued elements
- iii) Calculate and print the sum and average of the elements of array
- iv) Print the maximum and minimum element of array
- **v**) Remove the duplicates from the array
- vi) Print the array in reverse order

The program should present a menu to the user and ask for one of the options. The menu should also include options to re-enter array and to quit the program.

- **11.** WAP that prints a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.
- **12.** Write a program that swaps two numbers using pointers.
- **13.** Write a program in which a function is passed address of two variables and then alter its contents.
- **14.** Write a program which takes the radius of a circle as input from the user, passes it to

another function that computes the area and the circumference of the circle and displays the value of area and circumference from the main() function.

- **15.** Write a program to find sum of n elements entered by the user. To write this program, allocate memory dynamically using malloc() / calloc() functions or new operator.
- **16.** Write a menu driven program to perform following operations on strings:

	chu driven program to perform fonowing c	perations on sumgs.
a)	S	how address of each character in
	string	
b)	C	Concatenate two strings without using
	streat function.	
c)	С	Concatenate two strings using streat
	function.	
d)	C	compare two strings
e)	С	alculate length of the string (use
	pointers)	
f)	C	Convert all lowercase characters to
	uppercase	
g)	С	Convert all uppercase characters to
0.	lowercase	
h)	C	alculate number of vowels
i)	R	everse the string

- **17.** Given two ordered arrays of integers, write a program to merge the two-arrays to get an ordered array.
- 18. WAP to display Fibonacci series (i)using recursion, (ii) using iteration.
- **19.** WAP to calculate Factorial of a number (i)using recursion, (ii) using iteration.
- 20. WAP to calculate GCD of two numbers (i) with recursion (ii) without recursion.
- 21. Create Matrix class using templates. Write a menu-driven program to perform following Matrix operations (2-D array implementation):a) Sum b) Difference c) Product d) Transpose
- **22.** Copy the contents of one text file to another file, after removing all whitespaces.
- **23.** Write a function that reverses the elements of an array in place. The function must accept only one pointer value and return void.
- 24. Write a program that will read 10 integers from user and store them in an array. Implement array using pointers. The program will print the array elements in ascending and descending order.

These are only examples, more can be included related to the theory.

Use open source C compiler.

Text/Reference Books:

- 1. Programming with C, Byron S. Gottfried, McGraw Hill.
- 2. The C Programming Language, Kernighan and Dennis, PHI.
- 3. The Complete reference C, Herbert Schildt, McGraw Hill.
- 4. Let Us C, Kanitkar, BPB Publication.
- 5. Programming in ANSI C, Balaguruswamy, McGraw Hill.
- 6. Programming Languages, Allen B. Tucker, Tata McGraw Hill.

Computer Science (Honours) CMSA -CBCS Syllabus SEMESTER – II

Semester	Courses	Topics	Credit
	CMS-A-CC-2-3-TH (Core Course – 3) Theory	Computer Organization and Architecture	4
	CMS-A-CC-2-3-P (Core Course – 3) Practical	Computer Organization Lab.	2
	CMS-A-CC-2-4-TH (Core Course – 4) Theory	Basic Electronic Devices and Circuits	4
	CMS-A-CC-2-4-P (Core Course – 4) Practical	Basic Electronic Devices and Circuits Lab	2

SEMESTER – II

CMS-A-CC-2-3-TH: Computer Organization and Architecture Core Course-3: Theory: 04 Credits: 60 hours

Basic Structure of Computers (Qualitative Discussion)	(05
Computer Types, Basic Functional Units, Basic Operational Concept, Bus Structure,	hours)
Software, Performance, Multiprocessor and Multicomputer, IAS Computer, Historical	
perspectives.	
Register Transfer and Micro-operation	
Register Transfer Language, Register Transfer, Bus and Memory Transfers, Three State	(05
Bus Buffers, memory Transfer, Arithmetic and Logical micro-operations, Shift and	hours)
Arithmetic shifts.	
Basic Computer Organization and Design	(05
Instruction Codes, Stored Program Organization, Indirect Address, Computer Registers,	hours)
Common Bus System, Computer Instruction, Timing and Control, Instruction Cycle, fetch	
Decode, Register Reference Instructions, Memory Reference Instruction, Input-Output	
and Interrupt, Design of Basic Computer, Design of Accumulator Logic.	
CPU Organization	
Arithmetic and Logic Unit (ALU)- Combinational ALU, 2'S Complement Addition,	(06
Subtraction Unit, Booths Algorithm for Multiplication, Division Hardware using	hours)
Restoration Division Algorithm.	

General register organization, Control Word, Accumulator Based, Register Based, Stack Type CPU organization.

Control Unit

Hardwired Control Unit, Micro-programmed Control Unit: Control memory, Address (07 Sequencing, conditional branching, mapping of instructions, subroutine, Design of hours) Control Unit.

CPU Registers

Program Counter, Stack Pointer Register, Memory Address Register, Instruction Register, ⁽⁰⁶

Memory Buffer Register, Flag registers, Temporary Registers.		
Instructions.		
Operational Code, Operands, Zero, One, Two and Three Address Instruction, Instruction	(03	
Types, Addressing modes, Data Transfer and Manipulation instructions, Program control	hours)	
instructions.		
CISC and RISC processors	(03	
Introduction, relative merits and De-merits.	hours)	
Input / Output Organization		
Polling, Interrupts, subroutines, Memory mapped IO, IO mapped IO, DMA, I/O Bus and	(02	
Protocol, SCSI, PCI, USB, Bus Arbitration.	hours)	
Computer Peripherals	(08	
VDU, Keyboard, Mouse, Printer, Scanner (Qualitative approach).	hours)	
Memory		
(Primary memory: ROM, PROM, EPROM, EEPROM, Flash memory, RAM: SRAM,	(10	
DRAM, Asynchronous DRAMs, Synchronous DRAMs, Structure of Larger Memories,	hours)	
RAMBUS Memory, Cache Memory: Mapping Functions, Replacement Algorithms,		
interleaving, Hit and Rate penalty, Virtual memories, Address Translation, Memory		
Management requirements, Secondary Storage: Magnetic Hard Disks, Optical Disks,		

Magnetic Tape Systems.

CMS-A-CC-2-3-P: Computer Organization Lab. Core Course-3: Practical: 02 Credits: 40 hours

(1). Construct an Arithmetic Unit capable of performing 4-bit subtraction and Addition using 2's complement method. Use Parallel Adders and other necessary logic gates.

(2). Construct a logical Unit using logic gates capable of performing 4-bit, Bitwise ORing, ANDing, XORing and inversion.

(3). Construct an 4-bit ALU unit which can perform the following operation;

Sele	ection	Function
S_1	\mathbf{S}_{0}	
0	0	Addition
0	1	Subtraction
1	0	XOR-ing
1	1	Complement

(4). Construct a 2-bit Carry Look Ahead Adder using logic gates.

(5). Study and Construct a 1-digit BCD/Decimal adder using parallel adders and other necessary logic gates.

(6). Construct a Binary Multiplier using basic logic gates.

(7). Construct a Binary Divider using basic logic gates.

(8). Subtraction with 1's complement method using parallel adders and other necessary logic gates.

(9). Construction of BCD Subtractor with 9'S complement method using parallel adders and logic gates.

(10). Construction of BCD Subtractor with 10'S complement method using parallel adders and logic gates.

- (11). Binary magnitude comparators (up to 4 bits) using parallel adder and logic gates.
- (12). Construct a Binary 4-bit and 8-bit adder using logic gates.
- (13). Construct a Serial in Serial out 4-Bit register.
- (14). Construct a 4-Bit Universal Shift register.
- (15). Construct a 4 bit ring counter.
- (16). Construct a 4 Bit Johnson Counter.
- (17) Construct RAM (4-bit) and extend it
- (18). Horizontal and Vertical Cascading of Memory modules.
- (19). Code converters using memory modules.

Text/Reference Books

- 1. Computer System Architecture, Morries Mano, Pearson.
- 2. Computer Organization & Architecture, Williams Stallings, Pearson.
- 3. Computer Organization, Hamacher, Vranesic and Zaky, McGraw Hill.
- 4. Computer Architecture and Organization, Govindrajalu, Tata McGraw Hill.
- 5. Computer Architecture and Organization, J P Hayes, Tata McGRaw Hill.
- 6. Structured Computer Organization, Andrew S. Tanenbaum, Austin, 6th edition, Pearson.

CMS-A-CC-2-4-TH: Basic Electronic Devices and Circuits Core Course-4: Theory: 04 Credits: 60 hours

Basics of Circuit Theory:	(04
KVL, KCL, Thevenin's, Norton's, Superposition, Maximum Power Transfer Theorem.	hours)
Application to simple problems.	
Theory of Semiconductor devices: Semiconductor materials and their properties, classification based on energy band diagram, Intrinsic and extrinsic semiconductors, P & N type.	(03 hours)
Diode and its applications:	
Working Principle, construction and characteristics of PN junction diode, biasing,	(09
depletion region, Single Phase Half, Full wave and bridge rectifier using PN Junction	hours)
diode, Circuit, Working principle, Calculation of Average DC current and Voltage, RMS,	
Ripple Factor, efficiency, Peak Inverse Voltage (PIV).	
Zener diode: Characteristics and its application as a voltage regulator	

Bipolar Junction Transistor: Principle of Junction Transistor (including current components, current gains), Types: CE, CB, CC), DC biasing in CE mode: Q-Point, load line analysis, Transistor as an amplifier. Inverter using transistors: Transfer characteristics and threshold voltages	(08 hours)
Unipolar Junction Transistor: Principle of JFET and MOSFET, Depletion and Enhancement mode operations, Concept of NMOS, PMOS and CMOS. CMOS circuits for basic logic gates (NOT, NAND, NOR)	(08 hours)
PNPN Devices: Working Principle of SCR, UJT, construction, characteristics and simple applications: SCR, DIAC, TRIAC, SCR regulated power supply, Switch Mode Power Supply (SMPS) qualitative study only. Concept and functions of Optoelectronic materials (LED, LCD, Photo Sensors and basics of Optical Fiber and Opto-couplers).	(08 hours)
Operational Amplifiers (OPAMP): Inverting Amplifier, Non-inverting Amplifier, Offset parameters, Inverting and Non- inverting Adder, Differentiator, Integrator, Scale changer and Schmitt Trigger. Concept of Virtual ground, CMRR, Signal Generation using OPAMP: Monostable, Astable (Square wave generator)	(12 hours)
Timer : Construction and Functional description of 555, Mono-stable, Bistable and Astable Operation, VCO.	(04 hours)
Data Acquisition: R-2R ladder DAC, Weighted resistor type DAC, Flash Type ADC, Counter, Successive Approximation Register (SAR), Dual Slope ADC and Integrating Type.	(04 hours)

CMS-A-CC-2-4-P: Basic Electronic Devices and Circuits Lab. Core Course-4: Practical: 02 Credits: 40 hours

- 1. Study the forward characteristic of a p-n junction diode and calculate the static and dynamic resistance of the diode.
- 2. Construct a Half wave rectifier using power diodes and study its load regulation characteristics with or without capacitor filter.
- **3.** Construct a Full wave rectifier using power diodes and study its load regulation characteristics with or without capacitor filter.
- 4. Construct a Bridge rectifier using power diodes and study its load regulation characteristics with or without capacitor filter.
- 5. Study the forward and reverse characteristic of a Zener diode and also determine the value of the current limiting resistance.
- 6. Construct a Zener Voltage regulator and study its load regulation characteristics.

- 7. Construct a positive and negative voltage regulator using Three terminal linear voltage regulator 78XX and 79XX. Study its load regulation characteristics.
- 8. Construct a variable positive voltage regulator using Three terminal linear voltage regulator LM317 and study its load regulation characteristics for different sets of output voltage.
- **9.** Study the Output characteristics of a transistor in CE mode and calculate the gain from the graph.
- **10.** Using Transistor to construct NOT or Invert Operation and draw the transfer characteristics and measure the threshold voltage.
- **11.** Construct and study an Inverting Amplifier using OPAMP with different sets of input and feedback resistors and Calculate the gain from the graph.
- **12.** Construct and study an Non-Inverting Amplifier using OPAMP with different sets of input and feedback resistors and Calculate the gain from the graph.
- 13. Construct and study an Inverting Adder using OPAMP.
- 14. Construct and study an Non-Inverting adder using OPAMP.
- 15. Construct and study a subtractor using OPAMP.
- **16.** Construct and study the OPAMP as a differentiator.
- 17. Construct and study the OPAMP as a integrator.
- **18.** Construct an Astable Multivibrator using Timer 555.
- **19.** Construct an Astable Multivibrator using OPAMP.
- 20. Study and construct a R-2R ladder digital to analog converter.
- 21. Convert an analog signal into digital using ADC 0809.

Text/Reference Books:

- 1. Electronic Devices & Circuits Theory, Boylested & Nashelsky, PHI.
- 2. Electronics fundamental & Application, Chattopadhyay, Rakshit, New Age International Publishers.
- 3. Op-Amps And Linear Integrated Circuits, R. A. Gayakwad, Prentice Hall.
- 4. Solid State Electronic Devices, Streetman, PHI.
- 5. Elements of Electronics, Bagde Singh, S Chand Publication.
- 6. Microelectronic circuits, Sedra Smith, Oxford.
- 7. Operational Amplifier and Linear Integrated Circuits, Coughlin Driscol.
- 8. Electronic Devices and Circuits, Salivahanan, Suresh Kumar, McGrawHill education

Computer Science (Honours) CMSA - CBCS Syllabus SEMESTER – III

Semester	Courses	Topics	Credit	
	CMS-A-CC-3-5-TH	Data Structure	4	
	(Core Course-5) Theory			
	CMS-A-CC-3-5-P	Data Structure using C	2	
	(Core Course – 5) Practical			
	CMS-A-CC-3-6-TH	Computational Mathematics	4	
	(Core Course – 6) Theory	_		
	CMS-A-CC-3-6-P	Computational Mathematics Lab	2	
	(Core Course – 6) Practical	-		
111	CMS-A-CC-3-7-TH	Microprocessor and its Applications	4	
	(Core Course – 7) Theory			
	CMS-A-CC-3-7-P	Programming Microprocessor 8085	2	
	(Core Course – 7) Practical			
	Skill Enhance	ement Course, SEC-A		
	(Candidate has to opt any one topic from the under mentioned courses)			
	CMS-A-SEC-A-3-1-TH	Computer Graphics	2	
	Skill Enhancement Course, SEC-A-1			
	CMS-A-SEC-A-3-2-TH	Sensor Network and IoT	2	
	Skill Enhancement Course, SEC-A-2			

SEMESTER – III

CMS-A-CC-3-5-TH: Data Structure

01120		-		
Core	Course-	5:	Theory: 04 Credits:	60 hours

Introduction to Data Structure:

Abstract Data Type.

Arrays:

1D, 2D and Multi-dimensional Arrays, Sparse Matrices. Polynomial representation (Polynomial Representation as Application).

Linked Lists:

(09 hours) Singly, Doubly and Circular Lists; Normal and Circular representation of Self Organizing Lists; Skip Lists, Polynomial representation (Polynomial Representation as Application).

Stacks:

Implementing single / multiple stack/s in an Array; Prefix, Infix and Postfix expressions, Utility and conversion of these expressions from one to another; Applications of stack; Limitations of Array representation of stack

Queues:

Array and Linked representation of Queue, Circular Queue, De-queue, Priority Queues

(01 hour)

(05 hours)

(05 hours)

(05 hours)

Recursion:

Developing Recursive Definition of Simple Problems and their implementation; Advantages and Limitations of Recursion; Understanding what goes behind Recursion (Internal Stack Implementation)

Trees:

Introduction to Tree as a data structure; Binary Trees (Insertion, Deletion, Recursive and Iterative Traversals on Binary Search Trees); Threaded Binary Trees (Insertion, Deletion, Traversals); Height-Balanced Trees (Various operations on AVL Trees).

Searching and Sorting:

Linear Search, Binary Search, Comparison of Linear and Binary Search, Selection Sort, Insertion Sort, Merge Sort, Quick sort, Shell Sort, Comparison of Sorting Techniques

Hashing:

Introduction to Hashing, Deleting from Hash Table, Efficiency of Rehash Methods, Hash Table Reordering, Resolving collision by Open Addressing, Coalesced Hashing, Separate Chaining, Dynamic and Extendible Hashing, Choosing a Hash Function, Perfect Hashing Function.

CMS-A-CC-3-5-P: Data Structure Lab.

Core Course- 5: Practical: 02 Credits: 40 hours

- **1.** Write a program to search an element from a list. Give user the option to perform Linear or Binary search. Use Template functions.
- 2. WAP using templates to sort a list of elements. Give user the option to perform sorting using Insertion sort, Bubble sort or Selection sort.
- 3. Implement Linked List using templates. Include functions for insertion, deletion and search of a number, reverse the list and concatenate two linked lists (include a function and also overload operator +).
- 4. Implement Doubly Linked List using templates. Include functions for insertion, deletion and search of a number, reverse the list.
- 5. Implement Circular Linked List using templates. Include functions for insertion, deletion and search of a number, reverse the list.
- 6. Perform Stack operations using Linked List implementation.
- 7. Perform Stack operations using Array implementation. Use Templates.
- 8. Perform Queues operations using Circular Array implementation. Use Templates.
- 9. Create and perform different operations on Double-ended Queues using Linked List implementation.
- **10.** WAP to scan a polynomial using linked list and add two polynomial.
- 11. WAP to calculate factorial and to compute the factors of a given no. (i)using recursion, (ii) using iteration
- 12. (ii) WAP to display fibonacci series (i)using recursion, (ii) using iteration
- 13. WAP to calculate GCD of 2 number (i) with recursion (ii) without recursion
- 14. WAP to create a Binary Search Tree and include following operations in tree:
 - (a) Insertion (Recursive and Iterative Implementation)
 - (**b**) Deletion by copying
 - (c) Deletion by Merging
 - (d) Search a no. in BST
 - (e) Display its preorder, postorder and inorder traversals Recursively

(05 hours)

(15 hours)

(10 hours)

(5 hours)

- (f) Display its preorder, postorder and inorder traversals Iteratively
- (g) Display its level-by-level traversals
- (h) Count the non-leaf nodes and leaf nodes
- (i) Display height of tree
- (j) Create a mirror image of tree
- (k) Check whether two BSTs are equal or not
- 15. WAP to convert the Sparse Matrix into non-zero form and vice-versa.
- **16.** WAP to reverse the order of the elements in the stack using additional stack.
- 17. WAP to reverse the order of the elements in the stack using additional Queue.
- 18. WAP to implement Diagonal Matrix using one-dimensional array.
- 19. WAP to implement Lower Triangular Matrix using one-dimensional array.
- **20.** WAP to implement Upper Triangular Matrix using one-dimensional array.
- 21. WAP to implement Symmetric Matrix using one-dimensional array.
- **22.** WAP to create a Threaded Binary Tree as per inorder traversal, and implement operations like finding the successor / predecessor of an element, insert an element, inorder traversal.
- **23.** WAP to implement various operations on AVL Tree.

These are only sample programs, more can be included related to the theory.

Text/ Reference Books:

- 1) Fundamentals of Data Structures in C, Ellis Horowitz, Sartaj Sahni, Susan Anderson-Freed, Silicon Pr.
- 2) Data Structures: A Pseudocode Approach with C, Richard F. Gilberg and Behrouz A. Forouzan, Cengage Learning
- 3) Data Structures In C, Noel Kalicharan, CreateSpace Independent Publishing Platform.
- 4) Adam Drozdek, Data Structures and algorithm in C, Cengage Learning.
- 5) The C Programming Language, Brian W. Kernighan and Dennis Ritchie, Prentice Hall.
- 6) Sartaj Sahni, Data Structures, Algorithms and applications in C++, Second Edition, Universities Press, 2011.
- 7) Aaron M. Tanenbaum, Moshe J. Augenstein, Yedidyah Langsam, Dat,a Structures Using C and C++, 2nd ed., PHI, 2009.

CMS-A-CC-3-6-TH: Computational Mathematics Core Course- 6: Theory: 04 Credits: 60 hours

Introduction:

(05 hours)

Sets - finite and Infinite sets, uncountable Infinite Sets; functions, relations, Properties of Binary Relations, Closure, Partial Ordering Relations; counting - Pigeonhole Principle, Permutation and Combination; Mathematical Induction, Principle of Inclusion and Exclusion.

Growth of Functions:

(05 hours)

Asymptotic Notations, Summation formulas and properties, Bounding Summations, approximation by Integrals

Recurrences:

(06 hours)

Recurrence Relations, generating functions, Linear Recurrence Relations with constant coefficients and their solution, Substitution Method, Recurrence Trees, Master Theorem

Numerical Methods:

Errors in Approximate Calculations: Mathematical Preliminaries, Approximate and Rounding of Numbers, Significant figures, Error and their computation, Propagation of error, Percentage of error.

Interpolation: Newton Forward and Backward interpolation, Lagrange interpolation.

Solving Set of Linear Equations: Gaussian Elimination, Gauss- Jordan Elimination, Iteration method & its convergence condition and testing - Gauss-Seidel Iteration, Gauss-Jacobi Iterative Methods and different types of convergence, divergence.

Solving Non-linear equations: Bisection method, Regula-falsi method, Secant and Newton-Raphson method

Solving Differential Equations: Euler Method, Runge-Kutta second and fourth order method

Numerical Integration: Trapezoidal and Simpson's 1/3rd Rules. Line fitting: Linear, Quadratic fit,

Graph Theory

(20 hours) Basic Terminology, Models and Types, Multi graphs and Weighted graphs, Graph Representation, Graph Isomorphism, Connectivity, Euler and Hamiltonian Paths and Circuits, Planar Graphs, Graph Coloring, Trees, Basic Terminology and properties of Trees,

Introduction to Spanning Trees

Prepositional Logic:

Logical Connectives, Well-formed Formulas, Tautologies, Equivalences, Inference Theory

CMS-A-CC-3-6-P: Computational Mathematics Lab.

Core Course- 6: Practical: 02 Credits: 40 hours

Lab. based on the Graph theory and Numerical Methods using C.

Text/ Reference Books:

- C.L. Liu & Mahopatra, Elements of Discrete mathematics, 2nd Sub Edition 1985, Tata 1. McGraw Hill.
- Rosen, Discrete Mathematics and Its Applications, Sixth Edition 2006. 2.
- T.H. Coremen, C.E. Leiserson, R. L. Rivest, Introduction to algorithms, Prentice Hall 3. on India. (3rd edition 2009).
- 4. M. O. Albertson and J. P. Hutchinson, Discrete Mathematics with Algorithms 1988 John wiley Publication.
- 5. J. L. Hein, Discrete Structures, Logic, and Computability, Jones and Bartlett Publishers, 3rd Edition, 2009.
- D.J. Hunter, Essentials of Discrete Mathematics, Jones and Bartlett Publishers, 2008. 6.
- Numerical Analysis and Computational Procedures by Mollah; New Central Book. 7.
- 8. Computer Oriented Numerical Methods, 3rd Edition, V Rajaraman, PHI
- 9. Graph Theory With Applications To Engineering And Computer Science by Narsingh Deo, PHI.
- 10. Graph Theory by J.A. Bondy and U.S.R. Murty, Springer.
- 11. Introduction to Graph Theory by D B West, 2nd edition, Pearson Education

(20 hours)

(04 hours)

CMS-A-CC-3-7-TH: Microprocessor and its Applications

Core Course- 7: Theory: 04 Credits: 60 hours

Introduction to Microcomputer based system: (3 hours) History of evolution of Microprocessor and Microcontrollers and their advantages and disadvantages.

Microprocessor Architecture and Memory Interfacing: (14 hours) Basic Architecture of Microprocessor 8085 and explanation of each block, Microprocessor 8085 pin out and signals, Addressing modes, Instruction Formats, Instruction Cycle, Clock Cycle, Multiplexed Address Data Bus, Control and Status signals, Microprocessor and Bus Timing, De-multiplexing of Address Data Bus, Generation of Control Signals for I/O and Memory, Basic concepts in Memory Interfacing, Address Decoding and memory Addresses.

Interfacing I/O Devices:

Basic Interfacing concepts, Peripheral I/O instructions (I/O mapped I/O), Device Selection and data Transfer, Absolute and Partial Decoding, Input Interfacing, Interfacing I/O using decoders, Memory mapped I/O techniques, Interfacing 8155 memory segment.

Programming 8085:

Instruction Set of 8085, Different Programming Techniques, Stack and Subroutines, Counter and Time Delays, Code Conversion, BCD Arithmetic and 16 bit Data Operation.

Interfacing Peripheral (I/O) and Applications:

Interrupts: 8085 Interrupt, RST instructions, Software and Hardware interrupt, multiple Interrupts and Priorities, 8085 Vectored Interrupts, Restart as Software Instructions. Interfacing Digital to Analog Converters, Analog to Digital Interfacing, keyboard interfacing, interfacing 8255 (Mode - 0, BSR), Support IC chips- 251,8237/8257,8259

Microprocessor 8086:

The 8086 microprocessor- Architecture, Instruction set, Addressing modes, Interrupts, Memory interfacing with 8086.

CMS-A-CC-3-7-P: Programming Microprocessor 8085 **Core Course- 7: Practical: 02 Credits:** 40 hours

- 1. Assembly Language Programming for Arithmetic Operations like Addition, Subtraction, Multiplication and Division on 8, 16 bit data.
- 2. Assembly Language Programming for different logical operations.
- 3. Assembly Language Programming for code conversions.
- 4. Assembly Language Programming for different sorting techniques.
- 5. Assembly Language Programming for memory block transfer.
- 6. Assembly Language Programming for AP series and Fibonacci series.
- 7. Assembly Language Programming for HCF, LCM etc.
- 8. Assembly Language Programming for Searching.
- 9. Assembly Language Programming for frequency distribution.
- **10.** Block Replacement and transfer

(13 hours)

(10 hours)

(10 Hours)

(10 hours)

Many more programs can be included related to the programming techniques of Microprocessor 8085

Text/Reference books:

Microprocessor architecture, programming and applications with 8085/8085A, Wiley 1. eastern Ltd, 1989 by Ramesh S. Gaonkar.

Intel Corp: The 8085 / 8085A. Microprocessor Book – Intel marketing 2. communication, Wiley inter science publications, 1980.

An introduction to micro computers Vol. 2 - some real Microprocessor - Galgotia 3. Book Source, New Delhi by Adam Osborne and J. Kane.

Advanced Microprocessors by Ray and Bhurchandi - TMH. 4.

Intel Corp. Micro Controller Handbook – Intel Publications, 1994. 5.

Microprocessors and Interfacing by Douglas V. Hall, McGraw Hill International 6.

Assembly Language Programming the IBM PC by Alan R. Miller, Subex Inc, 1987. 7.

The Intel Microprocessors: 8086/8088, 80186, 80286, 80386 & 80486, Bary B. Brey, 8 Prentice Hall, India1996.

Skill Enhancement Course: SEC-A: Computer Graphics/ Sensor Network & IoT

CMS-A-SEC-A-3-1-TH: Computer Graphics

Skill Enhancement Course: SEC-A: Choice -1: Theory: 02 Credit: 40 hours

Introduction:

Basic concepts of Graphics Devices- Monochrome and Color Monitor displaying technique only and Printing technique of Printer device, Physical and logical units of graphics devices -Pixel and its different properties, Basic idea for image or picture formation using pixels -Raster Scan and Vector Scan, Image Color Model, Color Coding, Lookup Table based color mapping, Video Memory, Image Frame and frame image data areas of an image file.

Graphics Kernel System:

Basic elements, its representations and related operations, layered structures, hardware and software operation elements

Basic geometrical shapes formation algorithms:

Concepts Co-ordinate System, Line Segment, Circle and arc segment, elliptic segment and its formation DDA, Bresenham's and Midpoint scan conversion algorithms. Basic Operations on Images:

Two and Three Dimensional Transformations:

Geometric Transformations operations - Translation, Rotation, Scaling. Reflection, Shearing and Inverse of these operations, Homogeneous coordinate system representation, matrix representation

Coordinate Transformations operations - Translation, Rotation, Scaling. Reflection, Shearing and Inverse of these operations, Homogeneous coordinate system representation, matrix representation

Composite Transformations Operations – Basic ideas and matrix representations by matrix concatenation for a particular operation

(03 hours)

(05 hours)

(05 hours)

(10 hours)

Two and Three Dimensional Clipping:

Point Clipping, Line Clipping – Region coding, Cohen-Sutherland Algorithm, Midpoint subdivision Algorithm; Polygon and Polygon net model storing - Explicit Vertex method, Polygon Listing and Explicit Edge Listing and Basic Idea of Polygon Clipping (No mathematical foundation and algorithms)

Projection:

Basic Concept of Projection operation and its application, Classification - Perspective, Parallel and its subclasses, Principles of these projections (Geometric representation only, no Mathematical Foundation and algorithms)

Applications:

Basic Concepts Computer Art – publishing, drawing and drafting, Animation – Animating and modeling of real world, Morphing - Classification of morphing and Application to the Advertisements and publicities

Text/ Reference Books:

- 1. Computer Graphics by Zhigang Xiang, Roy Plastock, Schaum's Outlines Series.
- 2. Computer Graphics by Hern & Baker
- 3. Procedural Elements for Computer Graphics by David F. Roger, 2nd Edition, TMH
- 4. Computer Graphics by Folly & Vandam

CMS-A-SEC-A-3-2-TH: Sensor Network and IoT

Skill Enhancement Course: SEC-A: Choice -2: Theory: 02 Credit: 40 hours

Introduction to Wireless sensor networks	(02 hours)
Definition and background, challenges and constrains, Applicatio	ns (qualitative discussion
Node architecture	(03 hours)
Sensing subsystem, The processor subsystem, communication inte	erface and prototypes.

Operating System

Functional aspects, non-functional aspects, Prototypes.

Basic Architectural framework

Physical Layer

Medium Access control

Wireless MAC protocols, characteristics of MAC protocols in sensor networks, contention free MAC protocols, contention based MAC protocols, Hybrid MAC protocols.

Network laver

location based routing.

Node and network Management

Power Management: local power, Dynamic power, conceptual architecture. Time synchronization: clock and synchronization problem, Time synchronization & Protocols: Localization: ranging techniques, range based, range free and event driven.

(05 Lectures)

(10 Lectures)

(02 Lectures)

(05 hours)

(08 hours)Basic components, source coding, channel encoding, Modulation and signal properties.

(05 hours)

(03 hours)Data centric routing, proactive routing and on-demand routing, hierarchical routing,

(07 hours)

Security (qualitative discussion only.)

(07 hours)

Fundamental of network security, challenges in wireless sensor networks, security attacks, protocols and mechanisms in wireless sensor networks.

Introduction to IOT - Overview, IOT definition Evolution, IOT Architectures, Resource Management, Data Management and Analytics, Communication Protocols, IOT Applications, Security.

Text/ Reference Books:

1. Wireless Sensor Network by Sohraby, Minoli and Znati, Wiley Publications.

2. Wireless Sensor Network: A network perspective by Zheng & Abbas, Wiley.

3. Building Wireless Sensor Network by Faludi, O'Reilly.

4. Wireless Sensor Network: from theory to application by Ibrahiem, Ramakrishnan, CRC Press.

5. Wireless Sensor Network by H Mahmoud Ahmed Fahmy, Springer.

6. Internet Of Things by Bahga, Madishetty, Orient Blackswan pvt Ltd.

7. IOT fundamentals, David, Pearson Education.

8. Internet Of Things by Tripathy and Anuradha, CRC Press.

Computer Science (Honours) CMSA - CBCS Syllabus SEMESTER – IV

Semester	Courses	Topics	Credit
IV	CMS-A-CC-4-8-TH	Data Communication, Networking and	4
	(Core Course – 8) Theory	Internet Technology	
	CMS-A-CC-4-8-P	Computer Networking and Web	2
	(Core Course – 8) Practical	Design	
	CMS-A-CC-4-9-TH	Introduction to Algorithms & its	4
	(Core Course – 9) Theory	Applications	
	CMS-A-CC-4-9-P	Algorithms Lab.	2
	(Core Course – 9) Practical		
	CMS-A-CC-4-10-TH	Operating Systems	4
	(Core Course – 10) Theory		
	CMS-A-CC-4-10-TH	Operating Systems Lab.	2
	(Core Course – 10) Practical	(Shell Programming)	
	Skill Enhancement Course, SEC-B		2
	(Candidate has to opt any one topic from the under mentioned courses)		
	CMS-A-SEC-B-4-1-TH	Information Security	2
	Skill Enhancement Course, SECB1		
	CMS-A-SEC-B-4-2-TH	E-Commerce	2
	Skill Enhancement Course, SECB2		

SEMESTER – IV

CMS-A-CC-4-8-TH: Data Communication, Networking and Internet Technology Core Course- 8: Theory: 04 Credit: 60 hours

Data Communication Concepts

Analog and Digital Signals, Periodic and Non-periodic signals, Time and Frequency Domain, Bandwidth and Data rate, Signal rate, Serial and Parallel Transmission

Various modes of transmission

Simplex/ Half Duplex, Duplex; Features of guided and unguided transmission media; Circuit switching: time division & space division switch;

Physical structure of Network(25 hours)Types of connections (Topologies), Categories of Computer Network: LAN, MAN, WANModulation and Encoding: AM, FM, PM; Multiplexing: FDM, TDM, WDM, PCM,OSI Model Architecture

Internet Technology(20 hours)Internet Architecture, Client/ Server architecture of Internet network, OSI Reference Model,
Need of Internet protocols – TCP/IP, Ports, Domain Name Server (DNS), Internet service
providers, Dial up, ISDN, CRC, Routing, Cable, Modem, E-mail, IRC, Voice & Video

(10 hours)

(05 hours)

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Conferencing, Browsers, WWW, Google services, Internet advertising, ATM, Web tools-HTTP

CMS-A-CC-4-8-P: Computer Networks and Web Design **Core Course- 8: Practical: 02 Credit:** 40 hours

Computer Networks: Practical: Familiarization with Networking cables (CAT5, CAT6, UTP), Connectors (RJ-45, Tconnector), Hubs, Switches, LAN installation & configuration (peer-to-peer) process.

Web Design: Practical:

Web page design by HTML & PHP

PHP Programming

Introduction to PHP

- \triangleright PHP introduction, inventions and versions, important tools and software requirements (like Web Server, Database, Editors etc.)
- PHP with other technologies, scope of PHP \triangleright
- Basic Syntax, PHP variables and constants
 - Types of data in PHP, Expressions, scopes of a variable (local, global)
- PHP Operators : Arithmetic, Assignment, Relational, Logical operators, Bitwise, \triangleright ternary and MOD operator.
- \triangleright PHP operator Precedence and associativity
 - Handling HTML form with PHP

HTML

- \triangleright Capturing Form Data
- GET and POST form methods \triangleright
- \triangleright Dealing with multi value fields
- Redirecting a form after submission

PHP conditional events and Loops

- PHP IF Else conditional statements (Nested IF and Else) \triangleright
- \triangleright Switch case, while ,For and Do While Loop
- Goto, Break, Continue and exit

PHP Functions

- Function, Need of Function, declaration and calling of a function \triangleright
 - PHP Function with arguments, Default Arguments in Function
- AAA Function argument with call by value, call by reference
- Scope of Function Global and Local

String Manipulation and Regular Expression

- Creating and accessing String, Searching & Replacing String \triangleright Formatting, joining and splitting String, String Related Library functions
- Use and advantage of regular expression over inbuilt function
- Use of preg_match(), preg_replace(), preg_split() functions in regular expression

Array

Anatomy of an Array ,Creating index based and Associative array ,Accessing array

(2L)

(1 + 2 Lab)

(**3L**)

(5L)

(3L)

(2L)

(2L)

(05 hours)

(35 hours)

\triangleright Looping with Index based array, with associative array using each() and foreach() \triangleright

Some useful Library function

Text/ Reference Books:

1. B.A. Forouzan, "Data Communication and Networking", 3rd Edition, Tata McGraw Hill.

2. A.S. Tanenbaum, "Computer Networks (4th Edition) – Pearson Education/ PHI

- 3. W. Stallings, "Data and Computer Communication (5th Edition) PHI/ Pearson Education
- 4. Black, "Data & Computer Communication", PHI.
- 5. Harvey M. Deitel & Paul J. Deitel, "Internet & World Wide Web: How to program:, 4/e.

6. Shishir Gundavaram, "CGI Programming on the world wide web", O'Relly and Associates', 1996.

CMS-A-CC-4-9-TH: Introduction to Algorithms & its Applications **Core Course- 9: Theory: 04 Credit:** 60 hours

Introduction to Algorithms:

Definition, Characteristics, Recursive and Non-recursive algorithms.

Asymptotic Complexity Analysis of Algorithms: (10 hours) Space and Time Complexity, Efficiency of an algorithm, Growth of Functions, Polynomial and Exponential Complexity, Asymptotic Notations: Big O Notation and Small o notation, Big Ω and Small ω , Big Θ and Small φ Notations, Properties: Best case/worst case/average case analysis of well-known algorithms.

Algorithm Design Techniques:

Concepts and simple case studies of Greedy algorithms. Divide and conquer: Basic concepts, Case study of selected searching and sorting problems as divide and conquer techniques: Dynamic programming: General issues in Dynamic Programming, Case study of Binomial Coefficient computation.

Graph Representation and Algorithm: Graph traversal algorithms: BFS, DFS, Minimal spanning trees: Prim's Algorithm, Kruskal's Algorithm, Shortest path algorithms: Floyd's Algorithm, Floyd-Warshall Algorithm,

Classification of Problems:

P, NP, Satisfiability, Cook's Theorem (Statement Only).

Dijkstra's Algorithm, Graph Coloring Algorithms.

CMS-A-CC-4-9-P: Algorithms Lab. **Core Course- 9: Practical: 02 Credit:** 40 hours

Lab. based on Graph Theory and Numerical Methods using C

Graph Algorithms:

Implementation of Graph algorithms: Single Spanning Tree Generation using - BFS, DFS, Minimal Spanning Tree Generation using - Prim's Algorithm, Kruskal's Algorithm, Shortest

(05 hours)

(15 hours)

(25 hours)

(05 hours)

Path finding using - Floyd's Algorithm, Floyd-Warshall Algorithm, Dijkstra's Algorithm, Graph Partitioning Algorithm.

Text/References Books:

1. Introduction to Algorithms, Cormen, Leiserson, Rivest and Stein, TMH.

2. The Design and Analysis of Algorithms, Aho, Hopcroft and Ullman, Pearson Education.

3. The Art of Computer Programming, D.E.Knuth, Pearson Education, Vol. 3,

4. Algorithm Design, Jon Kleiberg and Eva Tardos, Pearson Education

5. Data Structures and Algorithms - K.Mehlhorn, EATCS, Vol. I & Vol. 2.

6. Computer Algorithms, S.Baase, Pearson Education

7. Fundamentals of Computer Algorithms, E.Horowitz and Sahani, Galgotia

8. Combinational Algorithms- Theory and Practice, E.M.Reingold, J.Nievergelt and N.Deo, PHI, 1997

CMS-A-CC-4-10-TH: Operating System **Core Course- 10: Theory: 04 Credit:** 60 hours

Introduction

Basic OS functions, types of operating systems batch systems-multiprogramming systems, time sharing systems; operating systems for personal computers & workstations, process control & real time systems.

Operating System Organization

Processor and user modes, kernels, system calls and system programs.

Process

System view of the process and resources, process hierarchy, threads, threading issues, thread libraries;

Process Scheduling

Preemptive and non-preemptive scheduling, Long term, short term and medium term Process Synchronization: Concurrent and processes, critical section, semaphores and application, methods for inter-process communication;

Deadlock:

Definition, Prevention, Avoidance, Detection, Recovery.

Memory Management

Physical and virtual address space; memory allocation strategies -fixed and variable partitions, paging, segmentation, virtual memory

File and I/O Management

Protection and Security

Policy mechanism, Authentication, Internal access Authorization.

(6 hours)

(10 hours)

(15 hours)

(10 hours)

(10 hours)

(5 hours) Directory structure, file operations, file allocation methods, disc management.

(4 hours)

CMS-A-CC-4-10-P: Operating System

Core Course- 10: Practical: 02 Credit: 40 hours

Shell programming and O.S. internals

- 1. WRITE A PROGRAM (using *fork()* and/or *exec()* commands) where parent and child execute:
 - **a**) same program, same code.
 - **b**) same program, different code.
 - c) before terminating, the parent waits for the child to finish its task.
- **2.** WRITE A PROGRAM to report behavior of Linux kernel including kernel version, CPU type and model. (CPU information)
- **3.** WRITE A PROGRAM to report behavior of Linux kernel including information on configured memory, amount of free and used memory. (memory information)
- 4. WRITE A PROGRAM to print file details including owner access permissions, file access time, where file name is given as argument.
- 5. WRITE A PROGRAM to copy files using system calls.
- 6. Write program to implement FCFS scheduling algorithm.
- 7. Write program to implement Round Robin scheduling algorithm.
- 8. Write program to implement SJF scheduling algorithm.
- 9. Write program to implement non-preemptive priority based scheduling algorithm.
- **10.** Write program to implement preemptive priority based scheduling algorithm.
- **11.** Write program to implement SRJF scheduling algorithm.
- **12.** Write program to calculate sum of n numbers using *thread* library.
- 13. Write a program to implement first-fit, best-fit and worst-fit allocation strategies.

The above examples are only samples, more can be included related to the theory.

Text/ Reference Books:

1. Operating Systems Concepts, A Silberschatz, P.B. Galvin, G. Gagne, 8th Edition, John Wiley Publications 2008.

- 2. Modern Operating Systems, A.S. Tanenbaum, 3rd Edition, Pearson Education 2007.
- 3. Operating Systems: A Modern Perspective, G. Nutt, 2nd Edition Pearson Education 1997.
 - 4. Operating Systems, Internals & Design Principles W.Stallings, 2008 5th Edition, PHI.
 - 5. Operating Systems- Concepts and design, M. Milenkovic, Tata McGraw Hill 1992.
 - 6. Sumitabha Das, UNIX Concepts and Applications, Tata McGraw-Hill
 - 7. D. P. Bovet and M. Cesati. Understanding the Linux Kernel. Third Edition, O'Reilly

Skill Enhancement Course: SEC-B: Information Security/ E-Commerce

CMS-A-SEC-B-4-1-TH: Information Security

Skill Enhancement Course: SEC-B: Choice -1: Theory: 02 Credit: 40 hours

Overview

(05 hours)

Overview of Security Parameters: Confidentiality, Integrity and availability-security violation, Assumptions and Trust- Security assurance, OSI security architecture,

Cryptography (10 hours)Mathematical Tools for Cryptography, Symmetric Encryption Algorithm, Theory of Block cipher design, Symmetric cipher model, Risk assessment, quantitative and qualitative approaches, Network security management, Firewalls, Web and wireless security management, Computer security log management, IT security infrastructure, Operating system security, user security, program security

Finite Field and Number Theory: (03 hours) Groups, Rings, Fields-Modular, Prime numbers, Fermat's and Euler's Theorem, Chinese remainder Theorem, Discrete Logarithm.

Hash Functions and Digital Signatures (05 hours)

Authentication requirement - Authentication function -MAC, Hash functions, Security of hash function, Hashing Algorithms: MD5.

Internet Firewalls for Trusted System:

Roles of Firewalls, Firewall related terminology, Types of Firewalls, Firewall designs,

E-Mail, IP & Web Security (Qualitative study) (05hours) E-mail Security: Security Services for E-mail-attacks possible through E-mail, Pretty Good S/MIME.

IP Security: Overview of IPSec, IP Security Architecture, Authentication Header, Encapsulation Security Payload.

Web Security: Secure Socket Layer/Transport Layer Security, Basic Protocol, SSL Attacks, Secure Electronic Transaction (SET).

Cyber Law

Cyber laws to be covered as per IT 2008:

Definitions, Digital Signature And Electronic Signature.

- 1) [Section 43] Penalty and Compensation for damage to computer, computer system, etc.
- 2) [Section 65] Tampering with Computer Source Documents.
- 3) [Section 66 A] Punishment for sending offensive messages through communication service, etc.
- 4) [Section 66 B] Punishments for dishonestly receiving stolen computer resource or communication device.
- 5) [Section 66C] Punishment for identity theft.
- 6) [Section 66D] Punishment for cheating by personation by using computer resource.
- 7) [Section 66E] Punishment for violation of privacy.
- 8) [Section 66F] Punishment for cyber terrorism.
- 9) [Section 67] Punishment for publishing or transmitting obscene material in electronic form.
- 10) [Section 67A] Punishment for publishing or transmitting of material containing sexually explicit act, etc. in electronic form.

(10 hours)

(02 hours)

- 11) [Section 67B] Punishment for publishing or transmitting of material depicting children in sexually explicit act, etc. in electronic form.
- 12) [Section 72] Breach of confidentiality and privacy.

Text/ Reference Books:

1. M. Bishop, "Computer Security: Art and Science", Pearson Education, 2003.

2. M. Stamp, "Information Security: Principles and Practice", John Wiley & Sons, 2005.

Cryptography and Network Security, William Stallings, Eastern Economy Edition, 3. PHI.

- 5. Understanding Cryptography, Paar and Pelzi, Springer.
- Cryptography and Network Security, Behrouz A Forouzan, McGraw Hill Education. 6.
- Information Security Principles and Practices by M. Merkow, J. Breithaupt,, Pearson 7. Education.

8 .Computer Security: Concepts, Issues and Implementation by A. Basta, W.Halton, Cengage Learning India.

CMS-A-SEC-B-4-2-TH: E-Commerce

Skill Enhancement Course: SEC-B: Choice -2: Theory: 02 Credit: 40 hours

An introduction to Electronic commerce:

What is E-Commerce (Introduction And Definition), Main activities E-Commerce, Goals of E-Commerce, Technical Components of E-Commerce, Functions of E-Commerce, Advantages and disadvantages of E-Commerce, Scope of E-Commerce, Electronic Commerce Applications, 9 Electronic Commerce and Electronic Business (C2C) (C2G,G2G, B2G, B2P, B2A, P2P, B2A, C2A, B2B, B2C).

The Internet and WWW:

Evolution of Internet, Domain Names and Internet Organization (.edu, .com, .mil, .gov, .net etc.), Types of Network, Internet Service Provider, World Wide Web, Internet & Extranet, Role of Internet in B2B Application, building own website, Cost, Time, Reach, Registering a Domain Name, Web promotion, Target email, Banner, Exchange, Shopping Bots

Internet Security:

Secure Transaction, Computer Monitoring, Privacy on Internet, Corporate Email privacy, Computer Crime(Laws , Types of Crimes), Threats, Attack on Computer System, Software Packages for privacy, Hacking, Computer Virus(How it spreads, Virus problem, virus protection, Encryption and Decryption, Secret key Cryptography, DES, Public Key Encryption, RSA, Authorization and Authentication, Firewall, Digital Signature(How it Works).

Electronic Data Exchange:

Introduction, Concepts of EDI and Limitation, Applications of EDI, Disadvantages of EDI, EDI model, Electronic Payment System: Introduction, Types of Electronic Payment System, Payment Types, Value Exchange System, Credit Card System, Electronic Fund Transfer, Paperless bill, Modern Payment Cash, Electronic Cash.

(10 hours)

(05 hours)

(10 hours)

(05 hours)

Planning for Electronic Commerce:

Planning Electronic Commerce initiates, Linking objectives to business strategies, Measuring cost objectives, Comparing benefits to Costs, Strategies for developing electronic commerce web sites.

Internet Marketing:

The PROS and CONS of online shopping, The cons of online shopping, Justify an Internet business, Internet marketing techniques, The E-cycle of Internet marketing, Personalization e-commerce.

Text/ Reference Books :

1. E-Commerce Concepts, Models, Strategies by G.S.V.Murthy, Himalaya Publishing House.

2. The E-Commerce Book, Teffano Korper and Juanita Ellis, Morgan Kaufmann

3. E-Commerce 2017, Kenneth C. Laudon and Carol Guercio Traver, Pearson

4. E- Commerce, Kamlesh K Bajaj and Debjani Nag Tata McGraw-Hill Education

5. Electronic commerce by Gray P. Schneider, International Student Edition.

6. E-Commerce, Fundamentals and Applications by Henry Chan, Raymond Lee, Tharam Dillon, Elizabeth Chang, Wiley Student Edition.

(05 hours)

(05 hours)

Computer Science (Honours) CMSA - CBCS Syllabus SEMESTER – V & VI

Semester	Courses	Topics	Credit		
v	CMS-A-CC-5-11-TH (Core Course 11) Theory	Data Base Management System (DBMS)	4		
	CMS-A-CC-5-11-P (Core Course 11) Practical	RDBMS Lab using My SQL & PHP	2		
	CMS-A-CC-5-12-TH (Core Course 12) Theory	Object Oriented Programming System (OOPs)	4		
	CMS-A-CC-5-12-P (Core Course – 12) Practical	OOPs Lab using Java	2		
VI	CMS-A-CC-6-13-TH	Software Engineering	4		
	CMS-A-CC-6-13-P	Software Engineering Lab	2		
	(Core Course – 13) Practical CMS-A-CC-6-14-TH	Theory of Computation	4		
	(Core Course – 14) Theory				
	CMS-A-CC-6-14-P (Core Course – 14) Practical	PROJECT	2		
	Discipline Specific Elective Courses- DSE-A				
	Candidates have to opt any one topic either from DSE-A-1 or from DSE-A-2 in Semester-V & another				
	topic either from DSE-A-3 or from DSE-A-4 in S	emester-VI from the following courses			
	CMS-A-DSE-A1-TH Discipl.Sp.Elec.DSEA1,Theory	Digital Image Processing	4		
	CMS-A-DSE-A1-P	Image Processing Lab.	2		
	Discipl.Sp.Elec.DSEA1, Practical.				
DSE-A	CMS-A-DSE-A2-TH Discipl.Sp.Elec.DSEA2,Theory	Data Mining & its Applications	4		
	CMS-A-DSE-A2-P Discipl.Sp.Elec.DSEA2, Practical.	Data Mining Lab.	2		
	CMS-A-DSE-A3-TH Discipl.Sp.Elec.DSEA3,Theory	Embedded Systems	4		
	CMS-A-DSE-A3-P Discipl.Sp.Elec.DSEA3. Practical.	Embedded Systems Lab.	2		
	CMS-A-DSE-A4-TH Discipl.Sp.Elec.DSEA4,Theory	Multimedia and its Applications	4		
	CMS-A-DSE-A4-P	Multimedia and its Applications Lab.	2		
	Discipi.Sp.Elec.DSEA4, Practical.	notive Courses DEF P			
	Candidates have to opt any one topic either from DSE-B-1 or from DSE-B-2 in Semester-V & another topic either from DSE-B-3 or from DSE-B-4 in Semester-VI from the following courses				
DSE-B	CMS-A-DSE-B1-TH Discipl.Sp.Elec.DSE-B-1.Theory	Operation Research (O.R.)	4		
	CMS-A-DSE-B1-P Discipl.Sp.Elec.DSE-B-1, Practical.	Operation Research (O.R.) Lab. using C/ Python	2		
	CMS-A-DSE-B2-TH Discipl.Sp.Elec.DSE-B-2.Theory	Programming using Python	4		
	CMS-A-DSE-B2-P Discipl.Sp.Elec.DSE-B-2, Practical.	Programming using Python	2		
	CMS-A-DSE-B3-TH	Introduction to Computational Intelligence	4		
	Discipl.Sp.Elec.DSE-B-3,Theory CMS-A-DSE-B3-P	Computational Intelligence Laboratory			
	Discipl.Sp.Elec.DSE-B-3, Practical CMS-A-DSE-B4-TH	Advanced Java	4		
	Discipl.Sp.Elec.DSE-B-4, Theory CMS-A-DSE-B4-P	Advanced Java Laboratory	2		
	Discipl.Sp.Elec.DSE-B-4, Practical				

SEMESTER – V: Core Courses

CMS-A-CC-5-11-TH: Database Management System **Core Course- 11: Theory: 04 Credit:** 60 hours

Introduction

Drawbacks of Legacy System; Advantages of DBMS; Layered Architecture of Database, Data Independence; Data Models; Schemas And Instances; Database Languages; Database Users, DBA; Data Dictionary; Functional Components of a DBMS

Entity Relationship(ER) Modeling

Entity, Attributes and Relationship, Structural Constraints, Keys, ER Diagram of Some Example Database, Weak Entity Set, Specialization and Generalization, Constraints of Specialization and Generalization, Aggregation.

Relational Model

Basic Concepts of Relational Model; Relational Algebra; Tuple Relational Calculus; Domain Relational Calculus.

Integrity Constraints

Domain Constraints, Referential Integrity, Assertions, Triggers.

Relational Database Design

Problems of Un-Normalized Database; Functional Dependencies (FD), Derivation Rules, Closure Of FD Set, Membership Of A Dependency, Canonical Cover; Decomposition to 1NF, 2NF, 3NF Or BCNF Using FD; Lossless Join Decomposition Algorithm; Dependency preservation.

SQL (20 hours) Basic Structure, Data Definition, Constraints and Schema Changes; Basic SQL Queries (Selection, Insertion, Deletion, Update); Order by Clause; Complex Queries, Aggregate Function and Group by Clause; Nested Sub Queries; Correlated Sub Queries; Views (Insert-Able and Updatable), Joined Relations; Set Comparisons (All, Some); Derived Relations Etc; Grant and Revoke, Transaction in SQL.

Record Storage and File Organization (Concepts only)

(8 hours) Fixed Length and Variable Length Records; Spanned and Un-Spanned Organization of Records; Primary File Organizations and Access Structures Concepts; Unordered, Sequential, Hashed; Concepts of Primary and Secondary Index; Dense and Sparse Index; Index Sequential Files; Multilevel Indices.

Transaction Processing (Concepts only)

ACID Properties; Transaction States, Concurrent Execution; Serializability (Conflict and View), Recoverability, Test for Serializability.

CMS-A-CC-5-11-P: Relational Database Management System Core Course- 11: Practical: 02 Credit: 40 hours

RDBMS Lab using My SQL & PHP

(4 hours)

(4 hours)

(4 hours)

(8 hours)

(8 hours)

(4 hours)

Text/ Reference Books :

1. Fundamentals of Database Systems 6th Edition, R. Elmasri, S.B. Navathe, Pearson Education.

2.Database Management Systems, R. Ramakrishanan, J. Gehrke, 3rd Edition, McGraw-Hill.

3. Database System Concepts 6th Edition, A. Silberschatz, H.F. Korth, S. Sudarshan, McGraw Hill.

4. Database Systems Models, Languages, Design and application Programming, R. Elmasri, S.B. Navathe, Pearson Education.

5. SQL and Relational Theory: How to Write Accurate SQL Code, Christopher J. Date, O'Reilly Media

6. Database Systems: A Practical Approach to Design, Implementation and Management, Thomas M. Connolly and Carolyn E. Begg, Pearson

CMS-A-CC-5-12-TH: Object Oriented Programming System (OOPs) Core Course- 12: Theory: 04 Credit: 60 hours

Introduction to Java

Java Architecture and Features, Understanding the semantic and syntax differences between C++ and Java, Compiling and Executing a Java Program, Variables, Constants, Keywords Data Types, Operators (Arithmetic, Logical and Bitwise) and Expressions, Comments, Doing Basic Program Output, Decision Making Constructs (conditional statements and loops) and Nesting, Java Methods (Defining, Scope, Passing and Returning Arguments, Type Conversion and Type and Checking, Built-in Java Class Methods),

Arrays, Strings and I/O

Creating & Using Arrays (One Dimension and Multi-dimensional), Referencing Arrays Dynamically, Java Strings: The Java String class, Creating & Using String Objects, Manipulating Strings, String Immutability & Equality, Passing Strings To & From Methods, String Buffer Classes. Simple I/O using System.out and the Scanner class, Byte and Character streams, Reading/Writing from console and files.

Object-Oriented Programming Overview

Principles of Object-Oriented Programming, Defining & Using Classes, Controlling Access to Class Members, Class Constructors, Method Overloading, Class Variables & Methods, Objects as parameters, final classes, Object class, Garbage Collection.

Inheritance, Interfaces, Packages, Enumerations, Autoboxing and Metadata (14 hours) Single Level and Multilevel, Method Overriding, Dynamic Method Dispatch, Abstract Classes, Interfaces and Packages, Extending interfaces and packages, Package and Class Visibility, Using Standard Java Packages (util, lang, io, net), Wrapper Classes, Autoboxing/Unboxing, Enumerations and Metadata.

Exception Handling, Threading, Networking and Database Connectivity (15 hours) Exception types, uncaught exceptions, throw, built-in exceptions, Creating your own exceptions; Multi-threading: The Thread class and Runnable interface, creating single and multiple threads, Thread prioritization, synchronization and communication, suspending/resuming threads. Using java.net package, Overview of TCP/IP and Datagram programming. Accessing and manipulating databases using JDBC.

(8 hours)

(4 hours)

(4 hours)

Applets and Event Handling

Applets:Introduction to Applets, Writing Java Applets, Working with Graphics, Java Incorporating Images & Sounds. Event Handling Mechanisms, Listener Interfaces, Adapter and Inner Classes. The design and Implementation of GUIs using the AWT controls, Swing components of Java Foundation Classes such as labels, buttons, textfields, layout managers, menus, events and listeners; Graphic objects for drawing figures such as lines, rectangles, ovals, using different fonts. Overview of servlets.

CMS-A-CC-5-12-P: Object Oriented Programming Lab.

Core Course- 12: Practical: 02 Credit: 40 hours

OOPs Lab Using JAVA

Text/Reference Books

1. Java: The Complete Reference, Herbert Schildt, McGraw-Hill Education

2. The Java Language Specification, Java SE by James Gosling, Bill Joy, Guy L Steele Jr, Gilad Bracha, Alex Buckley, Published by Addison Wesley.

- 3. Effective Java by Joshua Bloch, Publisher: Addison-Wesley.
- 4. Core Java 2 by Cay S. Horstmann, GaryCornell, Volume 1, Prentice Hall.
- 5. Programming with Java by E. Balaguruswamy, McGraw Hill.
- 6. Java: How to Program by Paul Deitel, Harvey Deitel, Prentice Hall.
- 7. Programming with JAVA by John R. Hubbard, Schaum's Series.

SEMESTER – VI: Core Courses

CMS-A-CC-6-13-TH: Software Engineering **Core Course-13: Theory: 04Credit: 60hours**

Introduction:

(3 hours) Defining system, open and closed system, modeling of system through computer hardware, communication systems, external agents and software systems; Importance of Engineering Methodology towards computerization of a system

Software Life Cycle:

Classical and Iterative Waterfall Model; Spiral Model and its importance towards application for different system representations, Comparative Studies

Software Requirement and Specification Analysis:

Requirements Principles and its analysis principles; Specification Principles and its representations

Software Design Analysis – Different level of DFD Design, Physical and Logical DFD, Use and Conversions between them, Process Representation - Pseudo English, Tight English, Decision Tables and Trees, Structured analysis - Structure Chart Conversion from DFD: Transform Centric and Transaction Centric conversions algorithms, Coupling and Cohesion of the different modules

Software Cost Estimation Modeling - Heuristic and Empirical Modeling; COCOMO

(5 hours)

(25 hours)

(15 hours)

Software Testing:

Software Verification and Validation; Testing objectives, Testing Principles, Testability; Error and Faults; Unit Testing, White Box and Blank Box Testing, Test Case Design: Test Vector, Test Stub,

Software Quality Assurances:

Concepts of Quality, Quality Control, Quality Assurance, SQA Activities, IEEE Standard for Statistical Software Quality Assurances (SSQA) criterions.

CMS-A-CC-6-13-P: Software Engineering Lab.

Core Course- 13: Practical: 02Credit: 40 hours

Based on some real life problems design: SRS, DFD, ERD

Text/ Reference Books:

1. Software Engineering: A Practitioner's Approach by R.S. Pressman, McGraw-Hill.

2. An Integrated Approach to Software Engineering by P. Jalote, Narosa Publishing House.

3. Software Engineering by K.K. Aggarwal and Y. Singh, New Age International Publishers.

4. Software Engineering by I. Sommerville, Addison Wesle.

5. Software Engineering for Students by D. Bell, Addison-Wesley.

6. Fundamentals of Software Engineering by R. Mall, PHI.

CMS-A-CC-6-14-TH: Theory of Computation Core Course-14: Theory: 04Credit: 60hours

Finite Automata:

Definition of a Finite Automaton, Model, Representation, Classification – with respect to output function Mealy and Moore Machines, with respect to State Transition – Deterministic and Non-Deterministic Machine, Examples, conversion algorithms Mealy to Moore and Moore to Mealy, Non-Deterministic to equivalent Deterministic-Optimized and Non-optimized technique ideas and algorithms, with null transition and without null transitions, Finite and Infinite state machines, Removal of Null-transitions, Acceptability of String by a Finite Automaton, Design of different Finite State Machines – examples like serial adder, serial parity generator, sequence generator and checker etc, Minimized Equivalent Machine, State Minimization Algorithm – Row elimination method, Implication Table Method

Formal Languages and Grammar:

Introduction to Formal Grammar and Language, Formal Definition, Chomsky's Classification of Grammar – Type 0, Type-1 or Context Sensitive, Type-2 or Context Free and Type-3 or Regular Grammar, Illustration of each of these classes with example, Sentential form, Sentences – Languages or strings, Derivations – left, right and random derivation, Derivation tree, Parse Tree, Syntax Tree, Ambiguous Grammar and Language, Designing of Grammar for a language, Finding Language for Given Grammar, Finding

(17 hours)

(10 hours)

(15 hours)

(15 hours)
Equivalent Minimized Context Free Grammar -a) by the removing Grammar Variables which are not generating any terminal string, and b) by the removing Terminal Symbols which are not generating from the start symbol and c) by the removing null production and d) by the removing unit production, Definition and basic idea about Push Down Automaton

Regular Expression:

Basic Idea and Definition, Regular Expression basic Identities, Arden's Theorem – Statement (without Proof) and application for reduction of equivalent regular expressions, Thompson's Construction Algorithm – Regular expression to Finite Automata conversion, State Transition System to Regular Expression conversion algorithm by Arden's Algebraic Method, FA to Regular Grammar and Regular Grammar to FA conversion algorithms and applications.

Turing Machine:

(15 hours)

(15 hours)

Concepts of Turing Machine, Formal Definitions, Classifications – Deterministic and Non-Deterministic Turing Machines, Simple Design of Turing Machines like – Unary Adder, Subtractor, Concatenator, Odd / even count etc and concepts of Universal Turing Machines and Turing Computing, Difference and Similarities between Turing Machine and a General Purpose Computer, Definition and significant of Halting Problem in Turing Machine.

CMS-A-CC-6-14-P: Project

Core Course-14:Practical:02Credit:40hours

Text/ Reference Books:

1. Introduction to Automata Theory, Languages, and Computation by John E. Hopcroft, Rajeev

Motwani, Jeffrey D. Ullman, 3rd Edition, Pearson.

2. Theory of Computer Science (Automata, Languages & Computation) by K L P Misra &

- N Chandrasekharan, 3rd Edition, PHI.
- 3. Introduction to Theory of Computation by Micheal Sipser, 3rd Edition, Cengage Learning.
- 4. Switching and Finite Automata Theory by Zvi Kohavi, Niraj.K.Jha, 3rd Edition, TMH.

5. Formal Language and Automata, P. Linz, Narosa

Discipline Specific Elective Course A: DSE-A:

Digital Image Processing/ Data Mining & its Applications/ Embedded Systems/ Multimedia and its Applications

CMS-A-DSE-A--1-TH: Digital Image Processing DSE-A: Choice-1: Theory: 04 Credit: 60 hours

Introduction

(05 hours)

Image definition and its representation, Pixels, Co-ordinate conventions, Image formats (Study of the image matrix), neighbourhood metrics, Sampling and quantization, Types of distance measure (concept only).

Spatial Domain

Image enhancement techniques in spatial domain, Contrast stretching, Histogram Processing, Noise smoothing, Sharpening, Pixel Classification.

Thresholding

(15 hours) Grey level thresholding, global/ local thresholding, Iterative thresholding, Edge detection operators, Region growing, Split/ merge techniques, Image feature/ primitive extraction, Background correction, Color enhancement

Image restoration

Basic Framework, Interactive Restoration, Image deformation and geometric transformations, image morphing, Restoration techniques, Noise characterization, Noise restoration filters, Restoration from projections, Hough transform, Huffman coding, Segmentation

Image Segmentation

Boundary detection based techniques, Point, line detection, Edge detection, Local processing, Regional processing, Region-based segmentation.

CMS-A-DSE-A--1-P: Image Processing Lab.

DSE-A: Choice-1: Practical: 02 Credit: 40 hours

Study of the Image matrices of different images using SciLab / GNU Octave.

Text/ Reference Books:

1) Digital Image Processing by Gonzalez, Pearson.

2) Digital Image Processing by Jayaraman and Veerakumar, TMH.

3) Digital Image Processing using MATLAB by Gonzalez, Eddins and Woods, McGraw Hill.

4) Digital Image Processing by Annadurai, Pearson.

5) Digital Image Processing; A remote sensing perspective by Jensen, Pearson.

6) Digital Image Processing by Castleman, Pearson.

7) B. Chanda and D. Dutta Majumder, "Digital Image Processing and Analysis", PHI, New Delhi, 2000.

CMS-A-DSE-A--2-TH: Data Mining and its Applications DSE-A: Choice-2: Theory: 04 Credit: 60 hours

Introduction:

Definition of Data Mining, Data pre-processing, Data cleaning, Data transformation, Data Reduction, Data Visualization, Data extraction from large dataset, Data integration, subsampling, Feature selection, Scalability issues of data mining algorithms, text mining, web mining.

Classification and Prediction:

Structural patterns of data, Tools for pattern recognition (preliminary concept), Linear models for classification, Evaluating the accuracy of the classifier or predictor, Bayesian Classification, Training and Test sets, Parametric and Non-parametric Learning, Minimum

(15 hours)

(30 hours)

(15hours)

(15 hours)

(10 hours)

Distance Classifiers, k-NN rule, Discriminant Analysis, Decision trees. Similarity Measure, Basic hierarchical and non-hierarchical Clustering algorithms, Some Applications, Neural Learning,

Data Warehousing (DWH):

(15 hours)

Introduction: Definition and description, need for data ware housing, need for strategic information, failures of past decision support systems, Application of DWH.

CMS-A-DSE-A--2-P: Data Mining Lab. DSE-A: Choice-2: Practical: 02 Credit: 40 hours

Data mining using PYTHON/C

Text/ Reference Books :

1. Ian H. Witten, Eibe Frank, Mark A. Hall, "Data Mining: Practical Machine Learning Tools and Techniques", Third Edition, Morgan Kaufman.

2. R.O. Duba, P.E. Hart and D.G. Stork, "Pattern Classification and Scene Analysis", 2nd Ed., Wiley, New York, 2000.

 J.T. Tou and R.C. Gonzalez, "Pattern Recognition Principles", Addison-Wesley, London, 1974
 Data Mining Concepts and Techniques by Jiawei Han and Micheline Kamber, Morgan Kaufmann Publishers.

5. Data Warehousing, Data Mining and OLAP by Berson, Tata McGraw Hill.

6. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach, Vipin Kumar, Pearson Education.

7. Data mining: Introductory and Advanced Topics by Dunham M H," Pearson Education.

8. Data Mining Concepts, Methods and Algorithms by Mehmed Kantardzic, John Wiley and Sons.

CMS-A-DSE-A--3-TH: Embedded Systems DSE-A: Choice-3: Theory: 04 Credit: 60 hours

Introduction to 8051:

Overview of Microcontroller, Memory, I/O interface

Intel Microcontroller 8051: Architecture, Peripheral Interface Controller (PIC).

Assembly Language Programming:

Instruction set, Addressing Modes, Jump, Loop and Call instructions, I/O Manipulation, Serial communication, Arithmetic and logical instructions.

Introduction to Embedded System Programming:

Data types and time delays, I/O programming, Logic operations, Data conversions, Data serialization, Interrupt programming, LCD and Keyboard interfacing, ADC, DAC, sensors interfacing, interfacing 8255, I/O interfacing for 8051, interfacing 8255, 8257, 8259/ 8279, ADC, DAC, Motor control using 8051 C.

(10 Hours)

(15 Hours)

(10 hours)

Programmable logic devices and Hardware description Language:

PAL, PLA, PLD, ASIC, FPGA (Qualitative study).

Hardware Description Language (VHDL):

Basic Terminology, Entity Declaration, Architecture body, Configuration and package declaration, Package body, Model analysis and Simulation. Basic Language elements, Behavioral Model, Dataflow Model, Structural Model,

Subprogram and overloading, Applications.

CMS-A-DSE-A--3-P: Embedded Systems Lab. DSE-A: Choice-3: Practical: 02 Credit: 40 hours

Practical: Sample practical problems can be included related to theory.

1. Assembly Language Programming related to Microcontroller 8051.

2. Programming Using Embedded C for 8051.

3. VHDL programs for construction and simulation of various digital circuits.

Text/ Reference Books:

1. David E.Simon, "An Embedded software primer", Pearson Education.

2. Kenneth J. Ayala, "The 8051 Microcontroller", Thomson.

3. Raj Kamal, "Embedded Systems:, TMH.

4. Raj Kamal, "Microcontroller", Pearson Education.

5. A VHDL Primer, J. Bhasker, Prentice Hall

6. FPGA Prototyping by VHDL Examples: Xilinx Spartan-3 Version, Pong P. Chu, Wiley-Interscience

CMS-A-DSE-A--4-TH: Multimedia and its Applications DSE-A: Choice-4: Theory: 04 Credit: 60 hours

Multimedia:

Introduction to multimedia, Components, Uses of multimedia.

Making Multimedia:

(06 hours) Stages of a multimedia project, Requirements to make good multimedia, Multimedia Hardware - Macintosh and Windows production Platforms, Hardware peripherals -Connections, Memory and storage devices, Multimedia software and Authoring tools.

Text:

Fonts & Faces, Using Text in Multimedia, Font Editing & Design Tools, Hypermedia & Hypertext.

Images:

Still Images – Bitmaps, Vector Drawing, 3D Drawing & rendering, Natural Light & Colors, Computerized Colors, Color Palletes, Image File Formats.

Sound:

Digital Audio, MIDI Audio, MIDI vs Digital Audio, Audio File Formats.

(04 hours)

(04 hours)

(15 Hours)

(10 Hours)

(06 hours)

(06 hours)

Video:

How Video Works, Analog Video, Digital Video, Video File Formats, Video Shooting and Editing.

Animation:

Principle of Animations. Animation Techniques, Animation File Formats.

Multimedia System:

An overview of multimedia system and media streams, Source representation and compression techniques text, speech and audio, still image and video, Graphics and animation.

Multi-modal Communication:

Video conferencing, networking support, Trans-coding

CMS-A-DSE-A--4-P: Multimedia and its Applications Lab. **DSE-A:** Choice-4: Practical: 02 Credit: 40 hours

Sample practical problems can be included related to theory.

Text/ Reference Books:

1. Multimedia: Making it work by Tay Vaughan, TMH.

2. Multimedia: Computing, Communications Applications by R Steinmetz and K Naharstedt, Pearson.

3. Multimedia Handbook by Keyes, TMH.

4. Multimedia System Design by K. Andleigh and K. Thakkar, PHI.

Discipline Specific Elective Course B: DSE-B:

Operation Research/ Programming using Python/ Introduction to Computational Intelligence/ Advanced Java

CMS-A-DSE-B--1-TH: Operation Research (O.R.) **DSE-B:** Choice-1: Theory: 04 Credit: 60 hours

Introduction:

(05 hours) Origin and development of operation research, Nature and characteristic features, models in O.R., application of O.R.

Linear Programming Problem:

Introduction, mathematical formulation of the problem and graphical solution method.

Simplex Method:

Introduction, computational procedure, artificial variable, problem of degeneracy, application of simplex method.

(10 hours)

(08 hours)

(06 hours)

(10 hours)

(05 hours)

(20 hours)

Techniques of Problem Solving:

Concept of problem solving, Problem definition, Program design, Debugging, Types of errors

Flowcharting, decision table, algorithms, Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming.

Overview of Programming:

Structure of a Python Program, Elements of Python

Concept, formulation of primal – dual, duality and simplex method, Dual Simplex method.

Transportation Problem:

Introduction, mathematical formulation, finding initial basic feasible solution, optimality, degeneracy, unbalanced transportation problem.

Assignment Problem:

Introduction, mathematical formulation and solution.

Game Theory:

Duality:

Some basic terminology, Two-person Zero-sum Game, Game without Saddle Point - Mixed strategy, Algebraic method for 2×2 Game

Network Scheduling:

Introduction, Critical Path Method (CPM), PERT calculation.

CMS-A-DSE-B--1-P: Operation Research (O.R.) Lab. using C/ Python **DSE-B:** Choice-1: Practical: 02 Credit: 40 hours

Lab sessions related to Theory.

Text/ Reference Books:

- 1. Operations Research by Kanti Swarup, P.K. Gupta, Man Mohan, Sultan Chand & Sons
- 2. Schaum's Outline of Operations Research, Richard Bronson and Govindasami Naadimuthu, McGraw-Hill Education
- 3. Operations Research: An Introduction, Hamady.A. Taha, TMH
- Operations Research: Applications and Algorithms, Wayne L. Winston, Duxbury 4. Press
- Operations Research Techniques for Management by V.K.Kapoor, 7th Edition, Sultan 5. Chand and Sons
- Frederick S. Hillier and 6. INTRODUCTION TO OPERATIONS RESEARCH, G. Lieberman, McGraw-Hill Higher Education

CMS-A-DSE-B--2-TH: Programming using Python DSE-B: Choice-2: Theory: 04 Credit: 60 hours

Planning the Computer Program:

in programming, Documentation.

(02 hours)

(10 hours)

(05 hours)

(05 hours)

(05 hours)

(05 hours)

(02 hours)

(02 hours)

Introduction to Python:

Python Interpreter, Using Python as calculator, Python shell, Indentation, Atoms, Identifiers and keywords, Literals, Strings, Operators(Arithmetic operator, Relational operator, Logical or Boolean operator, Assignment, Operator, Ternary operator, Bit wise operator)

Creating Python Programs:

Input and Output Statements, Control statements (Branching, Looping, Conditional Statement, Exit function, Difference between break, continue and pass.), Defining Functions, default arguments, Exception handling.

Iteration and Recursion:

Conditional execution, Alternative execution, Nested conditionals, Return statement, Recursion, Stack diagrams for recursive functions, Multiple assignment, while statement, for statement.

Strings and Lists:

String as a compound data type, Length, Traversal and the for loop, String slices, String comparison, A find function, Looping and counting, List values, Accessing elements, List length, List membership, Lists and for loops, List operations, List deletion. Cloning lists, Nested lists

Object Oriented Programming:

Introduction to Classes, Objects and Methods, Standard Libraries.

CMS-A-DSE-B--2-P: Python Programming Lab.

DSE-B: Choice-2: Practical: 02 Credit: 40 hours Open Source Computer Programming Language Python

Text/ Reference Books :

1. John V. Guttag, "Introduction to Computation and Programming Using Python", MIT Press

2. Allen Downey, "Think Python: How to Think Like a Computer Scientist", O'Reilly

- 3. Mark Lutz, "Learning Python, 5th Edition", O'Reilly
- 4. Python Programming for the Absolute Beginner, Michael Dawson, Cengage Learning.
- 5. Learning to Program in Python 2017, P. M. Heathcote, PG Online Limited

6. Python Programming Fundamentals, Authors: Lee and Kent D.

CMS-A-DSE-B--3-TH: Introduction to Computational Intelligence DSE-B: Choice-3: Theory: 04 Credit: 60 hours Introduction

Introduction to Artificial Intelligence, Brief History and Application, Structures and Strategies for state space search- Data driven and goal driven search, Heuristic search, Depth First and Breadth First search, Iterative deepening, A* algorithm, Game playing (Minimax), Rule-based system, Semantic Nets, Frames, Scripts, Conceptual Dependency, Introduction to PROLOG.

(05 hours)

(15 hours)

(04 hours)

(20 hours)

(10 hours)

(20 hours)

Neural Network

(20 hours)Basics of Artificial Neural Network, Characteristics and Comparison with biological neural network, Basic model of Artificial Neural Network: Single layer Perceptron model, Learning, Feed Forward Neural Network, Error, Back Propagation and weight updation, Perceptron, Bayesian Networks, Neural computational model- Hopfield Nets.

Rough sets

Basic difference between Rough sets and Fuzzy sets

Fuzzy Logic and Application

Fuzzy sets, application – basic operations, Properties, Fuzzy Relations, Fuzzy inference, Notion of Fuzziness, Operations on Fuzzy sets, Fuzzy Numbers, Brief overview of crisp sets, Crisp relations, Fuzzy relations, Max*-composition of fuzzy relation, Max*-transitive closure, Probability measures of fuzzy events, Fuzzy expected value, Approximate reasoning, Different methods of role aggregation and defuzzification,

CMS-A-DSE-B-3-P: Computational Intelligence Laboratory DSE-B: Choice 3: Practical: 02 Credit: 40 hours

Text/ Reference Books:

1. Christopher M. Bishop, "Pattern Recognition and Machine Learning".

2. E, Rich and K. Knight, "Artificial Intelligence", 2/e, Tata Mc. Graw Hill.

3. David Kriesel, "A Brief Introduction to Neural Network".

4. H.J.Zimmermann, "Fuzzy Set Theory - and its Applications"

5. Ivo Duntsch & Gunther Gediga, "Rough Set Data Analysis : A road to Non-invasive Knowledge Discovery", Methodos.

6. P.D. Wassermann, "An Introduction to Neural Computing: Theory and Practice", Van Nostrand Reinhold, New York, 1989.

7. B. Yegnarayana, "Artificial Neural Networks", Prentice Hall of India.

CMS-A-DSE-B--4-TH: Advanced Java **DSE-B:** Choice-4: Theory: 04 Credit: 60 hours

Basics of Servlet

Servlet: What and Why?, Servlet API, Servlet Interface, GenericServlet, HttpServlet, Servlet Life Cycle, ServletRequest methods, Servlet Collaboration, ServletConfig.

Session Tracking

Cookies, Hidden Form Field, URL Rewriting, Http Session

Basics of JSP

Life cycle of JSP, JSP API, JSP in Eclipse and other IDE's, Scripting elements, Implicit Objects, Directive Elements, Exception Handling, Action Elements, MVC in JSP.

JavaMail API

Sending Email, Sending email through Gmail server, Receiving Email, Sending HTML content

(18 hours)

(02 hours)

(10 hours)

(10 hours)

(06 hours)

(04 hours)

Design Pattern

Singleton, DAO, DTO, MVC, Front Controller, Factory Method

Introduction to JavaEE

The Need for JavaEE., Overview on the JavaEE Architecture, The EJB Model, Session Beans, JMS Overview.

Javascript

Introduction to Javascript, Ways to use Javascript, Working with events, Client-side Validation.

JQuery

Introduction to JQuery, Validation using JQuery, JQuery Forms, JQuery Examples, Key Services of the Application Server.

CMS-A-DSE-B-4-P: Advanced Java Laboratory DSE-B: Choice 4: Practical: 02 Credit: 40 hours

Text/ Reference Books:

1. Core Servlets and Javaserver Pages: Core Technologies, Marty Hall and Larry Brown, Prentice Hall.

2. JavaScript: The Definitive Guide, David Flanagan, O'Reilly.

3. Enterprise JavaBeans 3.0, Richard Monson-Haefel and Bill Burke, O'Reilly.

4. JavaScript and JQuery: Interactive Front-End Web Development, Jon Duckett, Wiley;

5. Professional JavaScript for Web Developers, Nicholas C. Zakas, Wrox

6. Java Design Pattern Essentials, Tony Bevis, Ability First Limited

7. Design Patterns: Elements of Reusable Object-Oriented Software, Erich Gamma, Richard Helm, Ralph Johnson and John Vlissides, Addison-Wesley Professional

(06 hours)

(08 hours)

(06 hours)

(10 hours)



UNIVERSITY OF CALCUTTA

SYLLABUS of Bachelor of Science (General) in Computer Science (CMSG) Choice Base Credit System (CBCS) 2018

	Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6
Core Course (CC)	CC-1	CC-2	CC-3	CC-4		
AECC	AECC-1	AECC-2				
Skill Enhancement			SEC-A	SEC-B	SEC-A	SEC-B
course (SEC)						
Total No. of Courses	4x100	4x100	4x100	4x100	4x100=400	4x100=400
& marks	=400	=400	=400	=400		
Total Credits	20	20	20	20	20	20

Semester-wise courses for B.Sc. (General)

Computer Science General (CMSG) Syllabus

Courses	Topics		
CMS-G-CC-1-1-TH Sem-1-Core Course-1 Theory	Computer Fundamentals and Digital Logic Design	04	
CMS-G-CC-1-1-P Sem-1-Core Course-1 Practical	Word Processing, Spreadsheet, Presentation and Web design by HTML/ PHP	02	
CMS-G-CC-2-2-TH Sem-2- Core Course-2Theory	Algorithm and Data Structure	04	
CMS-G-CC-2-2-P Sem-2-Core Course-2 Practical	Programming with C	02	
CMS-G-CC-3-3-TH Sem-3- Core Course-3 Theory	Computer Organization	04	
CMS-G-CC-3-3-P Sem-3-Core Course-3 Practical	Programming using PYTHON	02	
CMS-G-CC-4-4-TH Sem-4- Core Course-4 Theory	Operating System	04	
CMS-G-CC-4-4-P Sem-4-Core Course-4 Practical	Shell Programming (Unix/Linux)	02	
Skill Enhand	cement Courses (SEC-A & B): Choices : Semesters-3 to 6		
CMS-G-SEC-A-X-1-TH	Communication, Computer Network and Internet	02	
CMS-G-SEC-A-X-2-TH	Software Engineering	02	
CMS-G-SEC-B-X-1-TH	Multimedia and its Applications	02	
CMS-G-SEC-B-X-2-TH	Information Security		
Discipline Specific Elective- A (DSE- A): Candidate has to opt any one of the follow		opics	
CMS-G-DSE-A-5-1-TH	Data base Management System (DBMS)	04	
CMS-G-DSE-A-5-1-P	Database Design and Applications	02	
CMS-G-DSE-A-5-2-TH	Object Oriented Programming	04	
CMS-G-DSE-A-5-2-P	Object Oriented Programming by C++/ Java	02	
CMS-G-DSE-A-5-3-TH	Sensor Network and IoT	04	
CMS-G-DSE-A-5-3-P	Sensor Network and IoT Lab.	02	
Discipline Specific Elective- B (DSE- B): Candidate has to opt any one of the following topics			
CMS-G-DSE-B-6-1-TH	Embedded Systems	04	
CMS-G-DSE-B-6-1-P	Embedded Systems Lab.	02	
CMS-G-DSE-A-6-2-TH	Operation Research	04	
CMS-G-DSE-A-6-2-P	Operation Research Lab.	02	
CMS-G-DSE-A-6-3-TH	Computational Mathematics	04	
CMS-G-DSE-A-6-3-P	Computational Mathematics Lab.		

Semester –I

Courses	Topics	Periods	Credit
CMS-G-CC-1-1-TH Sem-1-Core Course-1 Theory	Computer Fundamentals and Digital Logic Design	60 hours	04
CMS-G-CC-1-P Sem-1-Core Course-1 Practical	Word Processing, Spreadsheet, Presentation and Web design by HTML/ PHP	40 hours	02

CMS-G-CC-1-1-TH: Computer Fundamentals and Digital Logic Design Core Course- 1: Theory: 60 Hours

Group A: Computer Fundamentals General Concepts:

Introduction to Computer and Problem Solving: Information and Data

Hardware: CPU, Primary and Secondary storage, Cache Memory, I/O devices, Bus structure, BIOS

Software: Systems and Application.

Generation of Computers: Super, Mainframe, Mini and Personal Computer, Work stations, Parallel machines (concept only).

Introduction to Programming Languages: Machine Language, Assembly Language, High Level Language.

Problem Solving: Flow Charts, Decision Tables and Pseudo codes.

System Software: Classifications- Operating Systems (OS); Translators – Compilers and Interpreters, Preprocessors, Assemblers, Loaders, Linkers, Line and Screen Editors, other utilities.

Virus: Concept, Detection and Protection

Multimedia: Basic Concept, associated hardware and software

Object Oriented Paradigm: Basic characteristics, Definition, Brief comparison with other types of programming paradigms.

Group B: Digital Logic Design(40 hours)

Number Systems and Codes:

Number representation: Weighted Codes, Non-weighted codes, Positional, Binary, Octal, Hexadecimal, Binary Coded Decimal(BCD), Conversion of bases. Complement notions. Binary Arithmetic, Binary Codes: Gray, Alphanumeric, ASCII, EBCDIC; Single Error-Detecting and Correcting Codes, Hamming Codes, Fixed point, Floating point representation.

Boolean Algebra: (08 hours)

Fundamentals of Boolean Algebra, Switches and Inverters, Functionally Complete Gates (AND, OR, NOT), NAND. NOR, Switching function and Boolean Function. De Morgan's Theorem, Min-term, Max term, Truthtables and minimization of switching function upto four variables, Algebraic and K-map method of Logic circuit synthesis, two-level and multi-level.

(08 hours)

(20 hours)

Digital Electronics:

(24hours)

Combinational Circuits: Realization of AND and OR Gates using diodes and NOT Gate using transistors, Standard Gate Assemblies, IC chips packaging nomenclature, Half and Full Adder(3 & 4 bit), Multi-bit adders – Ripple carry and Carry Look Ahead Adder, Adder/subtractor, BCD-Adder, Data selectors/multiplexers – expansions, reductions, function realization, universal function realization, multi-function realization, Decoders: function realization, De-multiplexer and function realization, Encoder, Priority Encoder, Parity bit Generator/checker, Gray Code Generator, Code Converters, Keyboard encoder, Seven segment display unit, Comparators.

Sequential Circuits: Model of Sequential computing, Difference between Combinational and Sequential circuit, RS-Latch: using NAND and NOR Gates, RS Latch as a Static RAM Cell, Problems of Basic Latch circuits, Digital Clock – Duty Cycle, Rising time, Falling time, Clocked Flip Flops - SR, JK, D, T, Level Trigger and Edge Trigger, Excitation Functions of each flip-flops, Flip-flops with Preset and Clear, Application of Flip-flops: Asynchronous Counter(UP/DOWN) upto 4 bit counter, Decade Counter, Mod – n Counter, Finite State machine Model – State Transition Diagram and Table, Synchronous Counters – different mod-n counters, Ring counter, Registers: Registers with parallel load, Shift Registers.

CMS-G-CC-1-1-P: Word Processing,Spreadsheet, Presentation and Web design by HTML/ PHP

Core Course- 1: Practical: 40 Hours

Word Processing: (05 hours)

Document creation, saving, editing; Formatting text andparagraphs; header and footers; clipart, tables; tools, Inserting images, files; mail merge; margins; Hyphenation; page setups; OLE; index and references; comments; templates; macros.

Spreadsheet: (05 hours)

Workbook, worksheets, cell; address; entering, editing, formatting ,filtering, sorting worksheet data; printing; charts; functions and formulas; macros; importing , exporting files;

Presentation:

(05 hours)

Slides; formatting; wizard, layout; word art; animation.

Web Design:

(25 hours)

Web page design can be taught in the laboratory classes by using HTML or PHP.

Text/ Reference Books:

- 1. Digital Circuits, Vol I & II, D. Ray Chaudhuri, Platinum Publishers.
- 2. Digital Systems Principle & Applications, Tocci&Widmer, EEE.
- 3. Digital Logic & State Machine Design, Comer, Oxford.
- 4. Digital Principle & Applications, Malvino& Leach, McGraw Hill.
- 5. Digital Design, Mano, PHI.
- 6. Computer Fundamentals, Anita Goel, Pearson Education.
- 7. Introduction to Computer Science, P.K.Sinha, P.Sinha, BPB Publication.

Semester –II

Courses	Topics	Periods	Credit
CMS-G-CC-2-2-TH Sem-2-Core Course-2 Theory	Algorithms and Data Structure	60 hours	04
CMS-G-CC-2-2-P Sem-2-Core Course-2 Practical	Programming with C	40 hours	02

CMS-G-CC-2-2-TH: Algorithms& Data Structure Core Course- 2: Theory: 60 hours

Introduction: Algorithms, ADT.

(04 hours)

Arrays: (10 hours) One dimensional and Two Dimensional Arrays, Row Major and Column MajorForms.

Linked List: (16 hours)

Singly and Doubly Linked List; Operations Like Insertion, Deletion. Searching.

Stacks and Queues: (16 hours)

Concepts of Stack and Queue; Insertion and Deletion of Elements;Array and Linked Representation: Prefix, Infix and Postfix Notation; Postfix Expression Evaluation, Infix to Postfix.

Searching: (04 hours) Algorithm of Sequential, Binary Search Techniques.

Sorting: (10 hours)

Bubble Sort, Selection Sort, Insertion Sort, Quick Sort, Merge Sort, Heap Sort.

CMS-G-CC-2-2-P: Programming with C Core Course- 2: Practical: 40 hours

Basic Structure: Character set, keywords, identifiers, constants, variables and type declaration. Sample programs, preprocessor.

Operators: Arithmetic, Relational, Logical, Assignment, Increment and Decrement, Conditional, comma; operator precedence and associativity; arithmetic expression-evaluation and type conversion. Character I/O, Escape sequence and formatted I/O.

Branching and Looping: if, if-else, while, do-while, for.

Arrays:One-dimensional and 2-dimensional. Different types of uses. String handling with arrays – read and write, concatenation, comparison, string functions.

User defined functions: Need; Call by Reference and Call by value; return values and types; nesting of functions; recursion.

Structures: Initialization; arrays of a structure, arrays within structures, structure within structure, size of structures, Dynamic Storage Allocation.

Pointers:Declaration and initialization; operators; pointer arithmetics; accessing variables, pointer & arrays, strings, functions, Linked lists, concepts and use in C with different examples.

File handling: Opening & Closing, I/O.

Other Features: Bit level operations, macro definitions, union, command line arguments

Text/ Reference Books:

- 1. Data Structure ,Liptsuitz, S. Outline Series.
- 2. Data Structure, Ellis Horowitz and SartazSahani, Galgotia.
- 3. Data Structure using C, S.K.Bandyopadhyay and K.N.Dey, Pearson Education.
- 4. Data Structure and Algorithm Analysis in C, Mark Allen Weiss, Pearson Education.
- 5. Programming in C. E. Balagurusamy, TMH.
- 6. Let us C, Y. Kanetkar, BPB Publication.

Semester –III

Courses	Topics	Periods	Credit
CMS-G-CC-3-3-TH Sem-3-Core Course-3 Theory	Computer Organization	60 hours	04
CMS-G-CC-3-3-P Sem-3-Core Course-3 Practical	Programming using Python	40 hours	02

CMS-G-CC-3-3-TH:Computer Organization Core Course- 3: Theory: 60 hours

Basic Computer Organization: (15 hours)

IAS Computer, Von Neumann Computer, System Bus. Instruction Cycle, Data Representation, Machine instruction and Assembly Language, CPU Organization: Arithmetic and Logic Unit, Control Unit, CPU Registers, Instruction Registers, Program Counter, Stack Pointer. CISC & RISC processors.

Instruction:

(02 hours)

Operation Code and Operand. Zero, One, Two and Three address instruction. Instruction types. Addressing modes. Stack organization.

Control Unit:(05 hours)

Control Structure and Behaviour, Hardwired Control and Micro programmed Control : Basic Concept, Parallelism in Microinstruction.

ALU: (10 hours)

Basic Structure of ALU, Addressing mode, Instruction Formats, Handling of interrupts and subroutines, Combinational ALU, 2's Complement Addition, Subtraction Unit, Booth's Algorithm for multiplication and division.

Memory:(15 hours)

Types of Memory, RAM, ROM, EPROM, EEPROM, DRAM, SRAM, SAM, PLA. Different storage technology; Memory Hierarchy:CPU Register, Cache Memory, Primary Memory, Secondary Memory and Virtual Memory.

I/O:

(08 hours)

(05 hours)

Polling, Interrupts, DMA, I/O Bus and Protocol, Memory mapped I/O and I/O mapped I/O,I/O system organization and interfacing, Bus: SCSI, PCI, USB, Bus arbitration.

Computer Peripherals:

VDU, Keyboard, Mouse, Printer, Scanner etc.

Text/ Reference Books:

1. Computer Architecture and Organizations, J.P.Hayes, TMH.

- 2. Computer System Architecture, M. Morris Mano, PHI.
- 3. Computer Organization and Architecture, William Stallings, Pearson Education.
- 4. Computer Architecture and Logic Design, Thomas C. Bartee, Mc. Graw Hill.

CMS-G-CC-3-3-P:Programming using Python **Core Course- 3: Practical: 40 hours Open Source Computer Programming Language Python**

Planning the Computer Program: (02 hours)Concept of problem solving, Problem definition, Program design, Debugging, Documentation.

Techniques of Problem Solving: (02 hours) Flowcharting, decision table, algorithms, Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming.

Overview of Programming:

Structure of a Python Program, Elements of Python

Introduction to Python:

Python Interpreter, Using Python as calculator, Python shell, Indentation, Atoms, Identifiers and keywords, Literals, Strings, Operators(Arithmetic operator, Relational operator, Logical or Boolean operator))

CreatingPython Programs:

Input and Output Statements, Control statements(Branching, Looping, Conditional Statement, Exit function, Difference between break, continue and pass.), Defining Functions, default arguments.

Iterationand Recursion:

Conditional execution, Alternative execution, Nested conditionals, Return statement, Recursion, Stack diagrams for recursive functions, Multiple assignment, while statement, for statement.

Strings and Lists:

String as a compound data type, Length, Traversal and the forloop, String slices, String comparison, A find function, Looping and counting, List values, Accessing elements, List length, List membership, Lists and for loops, List operations, List deletion.

Object Oriented Programming:

Introduction to Classes, Objects and Methods.

Text/ Reference Books :

1. John V. Guttag, "Introduction to Computation and Programming Using Python", MIT Press

- 2. Allen Downey, "Think Python: How to Think Like a Computer Scientist", O'Reilly
- Mark Lutz, "Learning Python, 5th Edition", O'Reilly 3.

(15 hours)

(05 hours)

(10 hours)

(20 hours)

(02 hours)

(04 hours)

Semester –IV

Courses	Topics	Periods	Credit
CMS-G-CC-4-4-TH Sem-4-Core Course-4 Theory	Operating System	60 hours	04
CMS-G-CC-4-4-P Sem-4-Core Course-4 Practical	Shell Programming (Unix/Linux)	40 hours	02

CMS-G-CC-4-4-TH:Operating System

Core Course- 4: Theory: 60 hours

System Software:(03 hours)

Introduction: Different System Softwares

Introduction to Operating Systems: (15 hours)

What is OS? User mode, Kernel mode, Mode Switching, Multiprogramming, Multitasking OS, Concepts of processes, Files, Shell, System calls, Time sharing systems, Types of operating systems: Operating systems for personal computers & workstations.

Concepts of Synchronization: (10 hours)

Critical Regions, Semaphores, Monitor Inter Process Communication Mechanism.

Processor Management:(07 hours)

Scheduling and its types, Priority Queue; Deadlock: Definition, Prevention, Avoidance, Detection, Recovery.

I/O Management:(08 hours)

Device and Device Controllers, Interrupt Handlers and Device drivers.

Memory Management:(10 hours)

Logical & Physical memory, Contiguous allocation, Paging, Segmentation, Swapping,Real andVirtual memory, Page Replacement Techniques.

File Systems:(07 hours)

Files and Directories, File Servers, Security and Protection.

CMS-G-CC-4-4-P:Shell Programming (Unix/ Linux) Core Course- 4: Practical: 40 hours

Shell Programming:Concept and simple programming problems. Linux system calls, IPC problems, use of semaphore for synchronization problems.

Text/Reference Books:

1. Operating Systems, H.M.Deitel, Pearson Education.

- 2. Operating System Concepts, A.Silberschatz, Peter B. Galvin, G.Gagne, John Wiley and sons.
- 3. Unix Shell Programming, Y. Kanetkar.
- 4. Your Unix The Ultimate guide, Sumitabha Das, Mc.Graw Hill.

Skill Enhancement Courses (SEC-A & B): Candidate has to opt any one either in Semester-III or in Semester-V from SEC-A and any one either in Semester-IV or in Semester-VI from SEC-B

Courses	Topics	Credit
CMS-G-SEC-A-X-1-TH	Communication, Computer Network and Internet	02
CMS-G-SEC-A-X-2-TH	Software Engineering	02
CMS-G-SEC-B-X-1-TH	Multimedia and its Applications	02
CMS-G-SEC-B-X-2-TH	Information Security	02

CMS-G-SEC-A-X-1-TH: Communication, Computer Network and Internet Skill Enhancement Course – A (SEC-A-1): Choice-1: Theory: 40 hours

Communication and Network:

(30 hours)

Introduction: Components, Uses, Application

Network Hierarchy:LAN, MAN, WAN; Topology;

Network Software:Layered, Interface, Protocol, Connection Less and Connection Oriented Service.

Reference Model:ISO-OSI and TCP/IP; Functionalities of each layer, Comparison between two models.

Data and Signals (Analog and Digital):Periodic & Non-periodic signals, FDM, TDM, Bandwidth, Bit Rate, Baud Rate, Bit Length, and Composite Signal.

Transmission Media:Transmission Spectrum, Guided (Twisted Pair, Coaxial, Optical Fiber) and Unguided (Radio Wave, Microwave, Infrared, and Satellite Communication: Geostationary, Low Orbit and VSAT).

Transmission Impairments: Noise, Distortion and Attenuation.

Digital Transmission: Line Coding (NRZ, NRZ-L,NRZ-I, RZ, Manchester, Differential Manchester); Block Coding (Basic Idea); Code Modulation (PCM, DM), Concepts of ADSL Modem.

Analog Transmission:Shift Keying (ASK, FSK, PSK, QPSK, QAM); **Multiplexing:**FDM, TDM, WDM.

Internet:(10 hours)

Bridges, Routers, Modem, Connectivity concept, DNS, URL, ISDN, WWW, Browser, IP Address, E-mail: Architecture and services, Voice and Video conferencing, Internet service providers, ADSL.

Text/ Reference Books:

1. Data Communication and Networking, B.A. Forouzan, TMH.

2. Data and Computer Communication, W. Stallings, Pearson Education.

3. Computer Network, Tanenbaum, Pearson Education.

CMS-G-SEC-A-X-2-TH: Software Engineering Skill Enhancement Course – A (SEC-A-2): Choice-2: Theory: 40 hours

Introduction:

Defining System, open and closed system, modeling of system, Communication system, Software life cycle, Different Models: Classical and Iterative Waterfall Model; Spiral Model and its importance towards application for different system representations, Comparative Studies

Software Requirement and Specification Analysis:(08 hours)

Requirements Principles and its analysis principles; Specification Principles and its representations

Software Design Analysis:

Different levels of DFD Design, Physical and Logical DFD, Use and Conversions between them, Process Representation - Pseudo English, Tight English, Decision Tables and Trees, Structured analysis - Structure Chart Conversion from DFD: Transform Centric and Transaction Centric conversions algorithms, Coupling and Cohesion of the different modules

Software Cost Estimation Modeling:

Heuristic and Empirical Modeling; COCOMO

Software Testing:

Software Verification and Validation; Testing objectives, Testing Principles, Testability; Error and Faults; Unit Testing, White Box and Blank Box Testing, Test Case Design: Test Vector, Test Stub

Software Quality Assurances: (02 hours)

Concepts of Quality, Quality Control, Quality Assurance, SQA Activities, IEEE Standard for Statistical Software Quality Assurances (SSQA) criterions.

Text/ Reference Books:

- 1. Fundamentals of Software Engineering, Rajib Mall, PHI.
- 2. Software Engineering, Pressman.

CMS-G-SEC-B-X-1-TH: Multimedia and its Applications Skill Enhancement Course – B (SEC-B-1): Choice-1: Theory: 40 hours

Multimedia System:

(10 hours)

An overview of multimedia system and media streams, Source representation and compression techniques text, speech and audio, still image and video.

Multi-modal Communication: (10 hours)

Video conferencing, networking support.

Multimedia OS: (20 hours)

Synchronization and QoS, Multimedia Servers.

Text/ Reference Books:

1. Multimedia: Making it work, Tay Vaughan, TMH. 2.Multimedia: Computing, Communications Applications, R Steinmetz and K Naharstedt, Pearson.

(06 hours)

(08 hours)

(04 hours)

CMS-G-SEC-B-X-2-TH: Information Security Skill Enhancement Course – B (SEC-B-2): Choice-2: Theory: 40 hours

Overview

Overview of Security Parameters: Confidentiality, Integrity and availability-security violation, OSI security architecture.

Cryptography

Mathematical Tools for Cryptography, Symmetric Encryption Algorithm, Theory of Block cipher design, Risk assessment, Network security management, Firewalls, Web and wireless security management, Computer security log management, IT security infrastructure, Operating system security, user security, program security

Finite Field and Number Theory:

Groups, Rings, Fields-Modular, Prime numbers, Fermat's and Euler's Theorem, Chinese remainder Theorem, Discrete Logarithm.

Internet Firewalls for Trusted System:

Roles of Firewalls, Firewall related terminology, Types of Firewalls, Firewall designs,

E-Mail, IP & Web Security (Qualitative study)

E-mail Security: Security Services for E-mail-attacks possible through E-mail, Pretty Good S/MIME.

IP Security: Overview of IPSec, IP Security Architecture, Authentication Header, Encapsulation Security Payload.

Web Security: Secure Socket Layer/Transport Layer Security, Basic Protocol, SSL Attacks, Secure Electronic Transaction (SET).

Text/ Reference Books:

1. M. Bishop, "Computer Security: Art and Science", Pearson Education, 2003.

2. M. Stamp, "Information Security: Principles and Practice", John Wiley & Sons, 2005.

3. Cryptography and Network Security, William Stallings, Eastern Economy Edition, PHI.

(05 hours)

(05 hours)

(15 hours)

C

(10hours)

(05 hours)

Semester – V & VI

Discipline Specific Elective Courses (DSE-A & B): Choices: Semesters-5&6

Semester-V: Discipline Specific Elective- A (DSE- A): Candidate has to opt any one from the following topics			
CMS-G-DSE-A-5-1-TH	Data base Management System (DBMS)	04	
CMS-G-DSE-A-5-1-P	Database Design and Applications	02	
CMS-G-DSE-A-5-2-TH	Object Oriented Programming	04	
CMS-G-DSE-A-5-2-P	Object Oriented Programming by C++/ Java	02	
CMS-G-DSE-A-5-3-TH	Sensor Network and IoT	04	
CMS-G-DSE-A-5-3-P	Sensor Network and IoT Lab.	02	
Semester-VI: Discipline Specific Elective- B (DSE- B): Candidate has to opt any one from the			
	following topics		
CMS-G-DSE-B-6-1-TH	Embedded Systems	04	
CMS-G-DSE-B-6-1-P	Embedded Systems Lab.	02	
CMS-G-DSE-B-6-2-TH	Operation Research	04	
CMS-G-DSE-B-6-2-P	Operation Research Lab.	02	
CMS-G-DSE-B-6-3-TH	Computational Mathematics	04	
CMS-G-DSE-B-6-3-P	Computational Mathematics Lab.	02	

CMS-G-DSE-A-5-1-TH: Database Management System Discipline Specific Elective Course – A (DSE-A-1): Choice-1: Theory: 60 hours

Introduction:(10 hours)

Drawbacks of Legacy System; Advantages of DBMS; Layered Architecture of Database, Data Independence; Data Models; Schemas And Instances; Database Languages; Database

ER Model: (10 hours)

Entity, Attributes and Relationship; Structural Constraints; Keys; ER Diagram of Some Example Database; Weak Entity Set; Symbolic Conventions; Specialization and Generalization; Constraints of Specialization and Generalization; Aggregation.

Relational Model:

(10 hours)

(20 hours)

Basic Concepts of Relational Model; Relational Algebra; Tuple Relational Calculus; Domain Relational Calculus.

Integrity Constraints: (10 hours)

Domain Constraints, Referential Integrity, Assertions, Triggers.

Relational Database Design:

Problems of Un-Normalized Database; Functional Dependencies, Derivation Rules, Closure Of FD Set, Membership Of A Dependency, Canonical Cover; Decomposition to 1NF, 2NF, 3NF Or

CMS-G-DSE-A-5-1-P: Database Design and Application Discipline Specific Elective Course – A (DSE-A-1): Choice-1: Practical: 40 hours

SQL:Basic Structure, Data Definition, Constraints and Schema Changes; Basic SQL Queries (Selection, Insertion, Deletion, Update); Order by Clause; Complex Queries, Aggregate Function and Group by Clause; Nested Sub Queries; Correlated Sub Queries; Views (Insert-Able and Updatable), Joined Relations; Set Comparisons (All, Some); Derived Relations Etc; Grant and Revoke, Transaction in SQL. **PHP Programming Lab**

Text/ Reference Books:

1. Fundamentals of Database Systems 6th Edition, R. Elmasri, S.B. Navathe, Pearson Education.

2. Database Management Systems, R. Ramakrishanan, J. Gehrke,3rd Edition, McGraw-Hill.

3. Database System Concepts 6th Edition, A. Silberschatz, H.F. Korth, S. Sudarshan, McGraw Hill.

4. Database Systems Models, Languages, Design and application Programming, R. Elmasri, S.B. Navathe, Pearson Education.

CMS-G-DSE-A-5-2-TH: Object Oriented Programming Discipline Specific Elective Course – A (DSE-A-2): Choice-2: Theory: 60 hours

Concepts:

Difference with procedure oriented programming, Data abstraction and Information Hiding: Objects, Classes and Methods, Encapsulation, Inheritance, Polymorphism,

Object Oriented Programming through C++: (40 hours)

Input/ Output, Function and Operator Overloading, Constructors and Destructors, Copy Constructors Assignment Operator, Overloading, Single and Multiple Inheritance, Polymorphism and Virtual Functions.

CMS-G-DSE-A-5-2-P: Object Oriented Programming by C++ / Java Discipline Specific Elective Course – A (DSE-A-2): Choice-2: Practical: 40 hours

Object Oriented Programming Lab. by using C++ / Java

Text/ Reference Books:

1. Object Oriented Programming with C++, Balagurusamy, TMH.

2. Effective Java by Joshua Bloch, Publisher: Addison-Wesley.

CMS-G-DSE-A-5-3-TH: Sensor Network and IoT Discipline Specific Elective Course – A (DSE-A-3): Choice-3: Theory: 60 hours

Introduction to Wireless sensor networks

Definition and background, challenges and constrains.

(20 hours)

(02 hours)

Node architecture

Sensing subsystem, The processor subsystem, communication interface.

Operating System

Functional aspects, non-functional aspects.

Basic Architectural framework

Physical Layer Basic components, source coding, channel encoding, Modulation and signal properties.

Medium Access control

Wireless MAC protocols, characteristics of MAC protocols in sensor networks, contention free MAC protocols.

Network layer

Data centric routing, proactive routing and on-demand routing, hierarchical routing, location based routing.

Node and network Management

Power Management: local power, Dynamic power, conceptual architecture. Time synchronization: clock and synchronization problem, Time synchronization & Protocols:

Security (qualitative discussion only.)

Fundamental of network security, challenges in wireless sensor networks, protocols and mechanisms in wireless sensor networks.

Introduction to IOT - Overview, IOT definition Evolution, IOT Architectures, Resource Management, Data Management and Analytics, Communication Protocols, IOT Applications.

1. Wireless Sensor Network by Sohraby, Minoli and Znati, Wiley Publications.

2. Wireless Sensor Network: A network perspective by Zheng & Abbas, Wiley.

3. Building Wireless Sensor Network by Faludi, O'Reilly.

4. IOT fundamentals, David, Pearson Education.

5. Internet Of Things by Tripathy and Anuradha, CRC Press.

CMS-G-DSE-B-6-1-TH: Embedded Systems Discipline Specific Elective Course – B (DSE-B-1): Choice-1: Theory: 60 hours

Introduction to 8051:

Overview of Microcontroller, Memory, I/O interface Intel Microcontroller 8051: Architecture, Peripheral Interface Controller (PIC).

Assembly Language Programming:

Instruction set, Addressing Modes, Jump, Loop and Call instructions, I/O Manipulation, Serial communication, Arithmetic and logical instructions.

(10 hours)

(10 hours)

(10 hours)

(20 hours)

(10 hours)

(10 hours)

(05 hours)

(12 hours)

(08 hours)

(03 hours)

Data types and time delays, I/O programming, Logic operations, Data conversions, Data serialization, Interrupt programming, LCD and Keyboard interfacing, ADC, DAC, sensors interfacing, interfacing 8255, I/O interfacing for 8051, interfacing 8255, 8257, 8259/8279, ADC, DAC.

Hardware Description Language (VHDL):

(20 hours)

Basic Terminology, Entity Declaration, Architecture body, Configuration and package declaration, Package body, Model analysis and Simulation.

CMS-A-DSE-B--6-1-P:Embedded Systems Lab. DSE-A: Choice-3: Practical: 02 Credit: 40 hours

Practical: Sample practical problems can be included related to theory.

- 1. Assembly Language Programming related to Microcontroller 8051.
- 2. VHDL programs for construction and simulation of various digital circuits.

Text/ Reference Books:

- 1. David E.Simon, "An Embedded software primer", Pearson Education.
- 2. Raj Kamal, "Embedded Systems:, TMH.
- 3. Raj Kamal, "Microcontroller", Pearson Education.
- 4. A VHDL Primer, J. Bhasker, Prentice Hall

CMS-G-DSE-B-6-2-TH: Operation Research Discipline Specific Elective Course – B (DSE-B-2): Choice-2: Theory: 60 hours

Introduction: (05 hours)Origin and development of operation research, Nature and characteristic features, models in O.R.

Linear Programming Problem: (05 hours)

Introduction, mathematical formulation of the problem.

Simplex Method:

Introduction, computational procedure, artificial variable, problem of degeneracy.

Duality:

(10 hours)Concept, formulation of primal – dual, duality and simplex method, DualSimplex method.

Transportation Problem (05 hours)

Introduction, mathematical formulation, finding initial basicfeasible solution, optimality, degeneracy.

Game Theory:

(10 hours)Some basic terminology, Two-person Zero-sum Game, Game without Saddle Point - Mixed strategy, Algebraic method for 2×2 Game

Network Scheduling

Introduction, Critical Path Method (CPM).

(05 hours)

(20 hours)

CMS-A-DSE-B-6-2-P:Operation Research (O.R.)Lab. using C/ Python

DSE-B: Choice-2: Practical: 02 Credit: 40 hours

Lab sessions related to Theory.

Text/ Reference Books:

- 1. Operations Research by KantiSwarup, P.K. Gupta, Man Mohan, Sultan Chand & Sons
- 2. Schaum's Outline of Operations Research, Richard Bronson and GovindasamiNaadimuthu, McGraw-Hill Education
- 3. Operations Research: An Introduction, Hamady.A.Taha, TMH

CMS-G-DSE-B-6-3-TH: Computational Mathematics Discipline Specific Elective Course – B (DSE-B-3): Choice-3: Theory: 60 hours

Errors: (05 hours) Introduction, Types of errors

Interpolation: (05 hours) Newton Forward and Backward Interpolation.

System of Linear Equations:(10 hours)Properties: linear dependency, Rank, Singularity of coefficient matrix,
Solution methods: Gaussian Elimination, Gauss-Jordan Elimination.

Solution of Non-linear Equations: (10 hours) Bisection algorithm, Newton-Raphson method.

Integration: (10 hours) Trapezoidal and Simpson's 1/3rd Rules and their composite forms

Graph Theory: (concept only) (20 hours) Basic Terminology, Models and Types, Multi graphs and Weighted graphs, Graph Representation, Graph Isomorphism, Connectivity, Euler and Hamiltonian Paths and Circuits, Planar Graphs, Graph Coloring, Trees, Basic Terminology and properties of Trees.

CMS-G-DSE-B-6-3-P:Computational Mathematics Lab. Discipline Specific Elective Course – B (DSE-B-3): Choice-3: Practical: 40 hours

Lab. based on the Graph theory and Numerical Methods using C/ Python.

Text/ Reference Books:

- 1. Numerical Analysis and Computational Procedures by Mollah; New Central Book.
- 2. Computer Oriented Numerical Methods, 3rd Edition, V Rajaraman, PHI
 - 3. Graph Theory With Applications To Engineering And Computer Science by NarsinghDeo, PHI.
 - 4. Introduction to Graph Theory by D B West, 2nd edition, Pearson Education



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12 /18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

<u>SI.</u>	Subject	<u></u>	Subject
<u>No.</u>		<u>No.</u>	
1	Anthropology (Honours / General)	29	Mathematics (Honours / General)
2	Arabic (Honours / General)	30	Microbiology (Honours / General)
3	Persian (Honours / General)	31	Mol. Biology (General)
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)
5	Bio-Chemistry (Honours / General)	33	Physical Education (General)
6	Botany (Honours / General)	34	Physics (Honours / General)
7	Chemistry (Honours / General)	35	Physiology (Honours / General)
8	Computer Science (Honours / General)	36	Political Science (Honours / General)
9	Defence Studies (General)	37	Psychology (Honours / General)
* 10	Economics (Honours / General)	38	Sanskrit (Honours / General)
11	Education (Honours / General)	39	Social Science (General)
12	Electronics (Honours / General)	40	Sociology (Honours / General)
13	English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)
15	Environmental Studies (AECC2)	43	Women Studies (General)
16	Film Studies (General)	44	Zoology (Honours / General)
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries - IFFV (Major)
18	French (General)	46	Sericulture - SRTV (Major)
19	Geography (Honours / General)	47	Computer Applications - CMAV (Major)
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)
.21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales Management – ASPV (Major)
22	History (Honours / General)	50	Communicative English -CMEV (Major)
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Dietetics CNDV (Major)
24	Home Science Extension Education	52	Bachelor of Business Administration (BBA)
	(General)		(Honours)
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design -
	· · · · · · · · · · · · · · · · · · ·		(B.F.A.D.) (Honours)
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)
27	Human Rights (General)	55	B. Music (Honours / General) and Music
			(General)
28	Journalism and Mass Communication		
	(monours / General)		

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar

CBCS SYLLABUS IN HISTORY (HONOURS)

CALCUTTA UNIVERSITY 2018

<u>University of Calcutta</u> HIS – A

The Three - year B.A. Honours in History will comprise 6 Semesters. The curriculum will consist of 14 Core Courses (CC), 4 Discipline Specific Elective (DSE) courses, 2 Ability Enhancement Compulsory Courses (AECC), 2 Skill Enhancement Courses (SEC) Each course will be of 100 Marks. Attendance: 10 marks per Paper, Internal Assessment: 10 marks per paper.

➢ Core Courses CC

[Fourteen courses. Each course: 6 credits (5 theoretical segments TH+ 1 for tutorial related segment TU). Total: 84 credits.

- Each course carries 80 marks. Teaching time: 6x14 = 84 hrs Minimum 60 classes
- ➢ 65 marks for theoretical segment.
- Question Pattern for subjective/descriptive segment of 65 marks: 3 questions out of 6 (within 500 words) (10 x3 = 30) + 4 questions out of 8 within 250 words; 5x4 = 20) + 15 objective type questions carrying 1 mark each (15 x 1 = 15).
- 15 marks for tutorial related segments as suggested below (any one from each mode):
- Any one of the following modes: upto 1000 words for one Term Paper/upto 500 words for each of the two Term Papers/ equivalent Book Review/ --based on syllabus -related and/or current topics .[The modes and themes and/or topics are be decided by the concerned faculty of respective colleges.]
- Core courses: 2 each in Semesters 1 and 2; three each in Semesters 3 and 4; 2 each in Semesters 5 and 6.
- ➤ IMPORTANT NOTES:

The Readings provided below include many of those of the UGC Model CBCS Syllabus in History. For further details of Course Objectives and additional references it is advised that the UGC model CBCS syllabus concerning relevant courses and topics should be given due importance and primarily consulted.

Cited advanced texts in Bengali are not necessarily substitutes, but supplementary to the English books. The format is subject to the common structural CBCS format of the University.

Discipline- specific Elective Courses DSE

Each course: 6 credits 5 for theoretical segment + 1 for tutorial-related segment. **(TH - 5 TU-1)**

DSE-A for Semester -5/6, DSE-B for Semester 5/6

- Each course carries 80 marks. Minimum 60 classes.
- ➢ 65 marks for theoretical segment.
- Question Pattern for subjective/descriptive segment of 65 marks: 3 questions out of 6 (within 500 words; (10 x3 = 30) + 4 questions out of 8 (within 250 words; 5x4=20) and 15 objective type questions carrying 1 mark each (15 x 1 = 15).
- 15 marks for tutorial-related segments as suggested below (any one from each mode): Any one of the following modes: upto 1000 words for one Term Paper/upto 500 words for each of the two Term Papers/ equivalent Book Review/ based on syllabus related and/or current topics [The modes and themes and/or topics of a. and b. to be decided by the concerned faculty of respective colleges.]
- HIS-A: Skill Enhancement/Skill-based Courses SEC Each Course: 2 credits . (Only theoretical.)

SEC – A in Semester 3, SEC – B in Semester 4.

- Each course carries 80 marks. Teaching time: 2 hrs per week or 2x14 = 28 hrs
- > 80 marks for theoretical segment.
- Question Pattern for subjective/descriptive segment of 80 marks: 4 questions out of 8 (within 500 words; (10 x4 = 40) + 5 questions out of 10(within 250 words; 5x5=25) and 15 objective type questions carrying 1 mark each (15 x 1 = 15).
- HIS-A: Ability Enhancement Compulsory Courses (AECC) Each Course 2 credits
 - AECC -1 : Communicative English/ MIL
 - AECC-2 : Environmental Studies
 - AECC -1 in Semester 1, AECC -2 in Semester 2

IMPORTANT NOTES:

LIST OF COURSES FOR HISTORY HONOURS PROGRAMME

The Readings provided below include many of those of the UGC Model CBCS Syllabus in History. For Course Objectives and references it is advised that the UGC model CBCS syllabus concerning relevant courses and topics should be given due importance and primarily consulted.

*Website: BA History (Honours):

- Cited advanced texts in Bengali are not necessarily substitutes, but supplementary to the English books.
- The format is subject to the common structural CBCS format of the University.

	SEM-1	SEM-2	SEM-3	SEM-4	SEM-5	SEM-6
CC	CC- 2TH/ 2TU 1& 2	CC- 2TH/2TU 3&4	CC- 3TH/3TU 5,6&7	CC- 3TH/3TU 8,9&10	CC-2TH/2TU 11,&12	CC- 2TH/2TU 13&14
DSE					DSE-A* DSE-B 2TH/2TU	DSE-A* DSE-B 2TH/2TU
**GE	GE-1 1TH/ 1TU	GE-2 1TH/ 1TU	GE-3 1TH/ 1TU	GE-4 1TH/ 1TU		
AECC	AECC-1 1TH/0 TU	AECC-2 1TH/ 0TU				
SEC			SEC-A 1TH/0 TU	SEC-B 1TH/0 TU		
Total No. of Courses and	4x100= 400	4x100= 400	5x100= 500	5x100= 500	4x100= 400	4x100= 400
Marks Total Credits	20	20	26	26	24	24

HIS-A COURSES SEMESTER WISE

***HIS-A- DSE** – Candidates can choose any one paper in Semester -5 and another in Semester 6 taking one from Group –A and the other from Group –B

****HIS-A Generic Elective (GE):** The four Generic Elective papers (courses) for History (Honours) students will be from any subject other than History. Similarly History as Generic Elective will be offered to students having Honours in any subject other than History. The Generic Elective papers in History, for Honours students (for students having Honours in any subject other than History, for General students (for BA General Students having History. as a General paper)

COURSE CODE	(6 Credits per Core Course)	
Subject-Hon-Core-Semester-Pa	per-TH&TU CORE COURSES	
HIS-A-CC -1-1-TH&TU		
HIS-A-CC -1-2-TH&TU		
HIS-A-CC -2-3-TH&TU		
HIS-A-CC -2-4-TH&TU		
HIS-A-CC -3-5-TH&TU		
HIS-A-CC -3-6-TH&TU		
HIS-A-CC -3-7-TH&TU		
HIS-A-CC -4-8-TH&TU		
HIS-A-CC -4-9-TH&TU		
HIS-A-CC -4-10-TH&TU		
HIS-A-CC -5-11-TH&TU		
HIS-A-CC -5-12-TH&TU		
HIS-A-CC -6-13-TH&TU		
HIS-A-CC -6-14-TH&TU		
Skill Enhanceme	nt Course (2 Credits per Course)	
GROUP-A	HI\$-G-\$EC-3-A(1) or A(2)-TH	
SEC-A-(1)		
SEC-A-(2)		
GROUP-B	HI\$-G-\$EC-4-B(1) or B(2)-TH	
SEC-B-(1)		
SEC-B-(2)		
DI\$CIPLINE \$PECIF	IC ELECTIVE (6 Credits per Course)	
GROUP-A \$	emester 5: D\$E A-1/ A-2 & \$emester-6: D\$E A-3/A4TH&TU	
DSE-A-(1)	HIS-A-DSE-A-1-5 TH&TU	
DSF-A-(2)	HIS-A-DSE-A-2 -5TH&TU	
	HIS-A-DSE-A-3-6 TH&TU	
DSF-A-(3)	HIS-A-DSE-A-4 -6 TH&TU	
DSE-A-(4)		
GROUP-B \$	emester 5: DSE B-1/ B-2 & Semester-6: DSE A3/A4 TH&TU	
DSE-B-(1)	HIS-A-DSE-B1 -5TH&TU	
DSE-B-(2)	HIS-A-DSE-B-2 -5TH&TU	
DSE-B-(3)	HIS-A-DSE-B-3-6 TH&TU	
DSE-B-(4)	HIS-A-DSE-B-4-6 TH&TU	
DISCIPLINE \$	PECIFIC ELECTIVE	
Note: Choose any one paper in Semester -5 and another in Semester 6 taking one from Group -A and the other from Group -B		
GENERIC E	LECTIVE (6 Credits per Course)	
Note: Core Courses Designed	I for General Programme will be offered as Generic	
Elective courses for students	of other Disciplines.	

Structure of B.A (Hons.) History Course under CBCS HIS-A-CC-1-14- TH &TU

Paper 1 SEM -1: History of India (From the Earliest times to C 300 BCE)

Paper 2 SEM-1: Social Formations and Cultural Patterns of the Ancient World other than India

Paper 3 SEM-2: History of India (c 300 BCE to c.750 CE)

Paper 4 SEM-2: Social Formations and Cultural Patterns of the Medieval World other than India

Paper 5 **SEM-3**: History of India (c.750 – 1206)

Paper 6 SEM-3: Rise of the Modern West –I

Paper 7 SEM-3: History of India (c.1206 – 1526)

Paper 8 SEM-4: Rise of the Modern West - 11

Paper 9 SEM-4: History of India (c.1526-1605)

Paper 10 **SEM-4** History of India (c.1605 – 1750s)

Paper 11 SEM-5: History of Modern Europe (c.1780-1939)

Paper 12 SEM-5: History of India (c.1750s-1857)

Paper 13 SEM-6: History of India (c. 1857 – 1964)

Paper 14 **SEM-6** : History of World Politics: (1945-1994)

HIS-A- DSE TH &TU

Discipline Specific Elective DSE (Any Four) Choosing any one paper in Semester -5 and another in Semester 6 taking one from Group –A and the other from Group –B
Paper 1 DSE-A-1 SEM -5: History of Bengal (c.1757-1905)
Paper 2 DSE-A-3 SEM -6: History of Bengal (c.1905-1947)
Paper 3 DSE-B-2 SEM -5: History of Southeast Asia – The 19th Century
Paper 4 DSE-B-4 SEM -6: History of Southeast Asia – The 20th Century
Paper 5 DSE-B-1 SEM -5: History of Modern East Asia – I China (c.1840 – 1949)
Paper 6 DSE-B-3 SEM -6: History of Modern East Asia – II Japan (c.1868 – 1945)
Paper 7 DSE-A-2 SEM -5: History of United States of America – I (c.1776 – 1945)
Paper 8 DSE-A-4 SEM -6: History of United States of America – II (c.1776-1945)

Skill Enhancement Courses SEC –A & B (Any Two) Choosing one from group-A and one from group-B) in Semester 3 and 4

SEC -A 1: SEM-3 Archives and museums

SEC -B 1: SEM-4 Understanding Popular Culture

SEC-A 2: SEM-3 Understanding Heritage

SEC-B 2: SEM-4 Art Appreciation: an Introduction to Indian Art

*Generic Elective Courses (GE) - Same as Core courses (CC) offered in the BA General Syllabus.

Detailed Syllabus History Honours HIS-A CC –1- 14 TH&TU CC 1 : History of India From the earliest times to C 300 BCE

I. Reconstructing Ancient Indian History:

a) Early Indian notions of History

b) Sources and tools of historical reconstruction.

c) Historical interpretations (with special reference to gender, environment, technology and regions)

II. Hunter-gatherers and the advent of food products

a)Paleolithic cultures- sequence and distribution; stone industries and other technological developments.

b) Mesolithic cultures – regional and chronological distribution; new developments in technology and economy; rock art.

c) Neolithic and Chalcolithic cultures: distribution and subsistence pattern

III. The Harappan civilization:

Origins; settlement patterns and town planning; agrarian base; craft productions and trade; social and political organization; religious beliefs and practices; art; the problem of urban decline and the late/post-Harappan traditions.

IV. Cultures in transition

Settlement patterns, technological and economic developments; social stratification; political relations; religion and philosophy; the Aryan problem.

a) North India (circa 1500 BCE – 300 BCE)

b) Central India and the Deccan (circa 1000 BCE – circa 300 BCE)

Essential Readings

Agarwal D.P, The Archaeology of India, London, 1982.

Basham A.L, The Wonder That Was India, London, 1954.

Chakrabarti Dilip Kumar, An Oxford Companion to Indian Archaeology, New Delhi, 2006.

Chakrabarti Dilip Kumar, India, An Archaeological History, Delhi, 1999

Sharma R.S, Looking for the Aryans, 1995.

Sharma R.S, Material Cultures and Social Formations in Ancient India, New Delhi, 1983.

Thapar Romila, Early India: From the Origins to AD 1300, London, 2002

Suggested Readings

Basham A.L ed. A Cultural History of India, New Delhi, 1975.

Ghosh Amalananda, The City in Early Historic India, Shimla, 1973.

Altekar A.S, The Position of Women in Hindu Civilization from Pre-historic times to the Present Day, New Delhi, 1962.

Chattopadhyaya B.D, Studying Early India: Archaeology, Texts and Historical Issues. New Delhi, 2003.

Sircar D.C, Indian Epigraphy, New Delhi, 1965.

Kosambi D.D, An Introduction to the Study of Indian History, Bombay, 1956

Kosambi D.D, Combined Methods in Indology and Other Writings, Edited and Introduced By B.D Chattopadhyaya

Jha D.N, Ancient India: An Introduction, New Delhi, 1998

Chattopadhyay D.P, Science and Society in Ancient India, Calcutta, 1977.

Erdosy George, Urbanization in Early Historic India, Oxford, 1988.

Staal Frits, Discovering the Vedas : Origins, Mantras, Rituals Insights, New Delhi, 2008. Possehl G.L, ed. Harappan Civilization- A Recent Perspective, Delhi, 1993 (second edition). Michell George, The Penguin Guide to the Monuments of India. London, 1989. Raychaudhuri H.C, Political History of Ancient India with a commentary by B.N.Mukherjee, New Delhi, 1996 (8th edition) Habib Irfan (General Editor), A People's History of India (Volume 1,2,3), New Delhi. Shastri K.A Nilakantha, A History of South India, Madras, 1974 (4th Edition) Lahiri Nayanjyot, The Decline and Fall of the Indus Civilization, New Delhi, 2000. Ray Nihar Ranjan, Brajadulal Chattopadhyaya, V.R. Mani and Ranabii Chakravarti eds. A Source Book of Indian Civilization, Kolkata, 2000. Sahu Bhairabi Prasad (ed.). Iron and Social Change in Early India. New Delhi: Oxford University Press, 2006. Chakraborty Ranabir, Exploring early India, upto circa AD 1300 Kochar R., The Vedic People, New Delhi. 2000. Majumdar R.C (General Editor), The History & Culture of the Indian People, Volumes I – III, Bombay, 1951, 1968, 1970 Sharma R.S., Advent of the Aryans, Manohar, 1999. Sharma R.S, Aspects of Political Ideas and Institutions in Ancient India. New Delhi, 2005 (reprint). Sharma R.S. India's Ancient Past, New Delhi, 2005. Sharma R.S, Perspectives in the Social and Economic History of Early India, New Delhi, 1983. Sharma R.S, Sudras in Ancient India. Salomon Richard, Indian Epigraphy: A Guide to the Study of Inscriptions in Sanskrit, Prakrit, and Other Indo-Aryan Languages. New York, 1998. Thapar Romila (et al). India: Historical Beginnings and the Concept of the Aryan, New Delhi, 2006 Thapar Romila, From Lineage to State, Delhi, 1996 (2nd Edition) Ratnagar Shireen, (ed), Women in Early Indian Societies. New Delhi, 1999. Ratnagar Shireen, The End of the Great Harappan Tradition, Delhi, 2000 Roy Kumkum, The Emergence of Monarchy in North India: eighth to fourth centuries BC, NewDelhi, 1994 Ratnagar Shireen, Understanding Harappa, Delhi 2001 Saraswati S.K, A Survey of Indian Sculpture, New Delhi, 1975 (second edition) Bhattacharji Sukumar, Women and Society in Ancient India. Calcutta, 1994. Singh Upinder, A History of Ancient and Early Medieval India. Delhi, 2008. বাশাম এ এল, অতীতের উজ্জ্বল ভারত, (The Wonder That Was India), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৫ চক্রবর্তী রণবীর, ভারত ইতিহাসের আদি পর্ব, কলকাতা, ২০০৭ হাবিব ইরফান, ভারতবর্ষের সাধারণ মানুষের ইতিহাস প্রথম খন্ড - প্রাক-ইতিহাস, (Pre-history) এন বি এ, কলকাতা, ২০০২ দ্বিতীয় খন্ড: সিন্ধ সভ্যতা, (The Indus Civilisation) এন বি এ, কলকাতা, ২০০২ তৃতীয় খন্ড - বৈদিক সভ্যতা, (The Vedic Age) এন বি এ, কলকাতা, ২০০২ ঝাডি এন, আদি ভারত – একটি সংক্ষিপ্ত ইতিহাস, (Ancient India: An Introduction), প্রগ্রেসিভ পাবলিশার্স, কলকাতা কোশাম্বী ডি ডি, ভারত ইতিহাস চর্চার ভূমিকা (An Introduction to the Study of Indian History) বাগচিকে পি এন্ড কোং, কলকাতা, ২০০২

Allchin F.R. (ed). The Archaeology of Early Historic South Asia: The Emergence of Cities and

States, Cambridge, 1995.
রঙ্গাগর শিরিণ, হরপ্পা সভ্যতার সন্ধানে (Understanding Harappa) এন বি এ, কলকাতা, ২০০৩ রায়চৌধুরী হেমচন্দ্র, প্রাচীন ভারতের রাজনৈতিক ইতিহাস, (Political History of Ancient India), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা থাপার রোমিলা, ভারতবর্ষের ইতিহাস, ওরিয়েন্ট লংম্যান, কলকাতা ভট্টাচার্য নরেন্দ্রনাথ, প্রাচীন ভারতে ধর্ম, কলকাতা, ১৯৮৮ ভট্টাচার্য নরেন্দ্রনাথ, প্রাচীন ভারতীয় সমাজ, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা ভট্টাচার্য সকমারী, ইতিহাসের আলোকে বৈদিক সাহিত্য, পশ্চিমবঙ্গ রাজ্য পস্তুক পর্ষদ, কলকাতা ভট্টাচার্য সুকুমারী, প্রাচীন ভারত- সমাজ ও সাহিত্য, আনন্দ পাবলিশার্স, কলকাতা চক্রবর্তী দিলীপ কুমার – ভারতবর্ষের প্রাক ইতিহাস আনন্দ পাবলিশার্স, কলকাতা, ১৯৯৯ গঙ্গোপাধ্যায় দিলীপ কুমার - ভারত ইতিহাসের সন্ধানে, (২ খন্ডে), ২০০৭ চক্রবর্ত্তী রণবীর, প্রাচীন ভারতের অর্থনৈতিক ইতিহাসের সন্ধানে, আনন্দ পাবলিশার্স, কলকাতা ২০০২ (সংশোধিত সংস্করণ) চানানা দেবরাজ, প্রাচীন ভারতে দাস প্রথা, (Slavery in Ancient India as depicted in Pali and Sanskrit Texts), কে পি বাগচি এন্ড কোং, কলকাতা ১৯৯৫ রায় নীহাররঞ্জন, বাঙালির ইতিহাস, কলকাতা, ১৯৮০(দ্বিতীয় সংস্করণ) শর্মা রামশরণ, প্রাচীন ভারতে বস্তুগত সংস্কৃতি ও সমাজ সংগঠন, (Material Cultures and Social Formations in Ancient India), ওরিয়েন্ট লংম্যান, ১৯৯৮ শর্মা রামশরণ, আদি মধ্যযুগের ভারতীয় সমাজ : সমস্ত-প্রক্রিয়া বিষয়ে এক সমীক্ষা (Early Medieval Indian Society : A Study in Feudalism) ওরিয়েন্ট লংম্যান, ২০০৩ শর্মা রামশরণ, ভারতের সমাজতন্ত্র, (Indian Feudalism), কে পি বাগচি এন্ড কোং, কলকাতা শর্মা রামশরণ, আর্যদের অনুসন্ধান, (Looking for the Aryans), প্রগ্রেসিভ পাবলিশার্স, কলকাতা শর্মা রামশরণ, আর্যদের ভারতে আগমন, (Advent of the Arvans), ওরিয়েন্ট লংম্যান, ২০০১ শর্মা রামশরণ, প্রাচীন ভারতে শূদ্র, (Sudras in Ancient India), কে পি বাগচি এন্ড কোং, কলকাতা থাপার রোমিলা, অশোক ও মৌর্যদের পতন, (Asoka and the Decline of the Mauryas), কে পি বাগচি এন্ড কোং, কলকাতা চট্টোপাধ্যায় সুনীল, প্রাচীন ভারতের ইতিহাস (১ম থন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, একাদশ মুদ্রণ, এপ্রিল ২০০৪ চট্টোপাধ্যায় সুনীল, প্রাচীন ভারতের ইতিহাস (২য় খন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ৮ম মুদ্রণ, ফেব্রুয়ারি ২০০৪ মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস (১ম থন্ড) (প্রাচীন ও মধ্যযুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, প্রথম মুদ্রণ নভেম্বর ১৯৯৭

<u>CC-2 : Social Formations and Cultural Patterns of the ancient world other</u> <u>than India</u>

I. Evolution of human kind: Paleolithic and Mesolithic cultures – Role of kinship social institutions in the development of early societies.

II. Food production : beginnings of agriculture and animal husbandry.

III. Bronze Age civilizations, with reference to any one of the following : i)Egypt (Old Kingdom); ii)China(Shang), economy, social stratification, state structure, religion.

IV. Nomadic groups in Central and West Asia; Debate on the advent of iron and its implications.

V. Slave society in ancient Greece & Rome: agrarian economy, urbanization, trade.

VI. Polis in ancient Greece: Athens and Sparta; Greek culture.

Essential Readings

Farooqui Amar, Early Social Formations. Manak Publications Pvt. Ltd. 2002
B.Fagan, People of the Earth. : an introduction to world prehistory
New York, NY HarperCollins College Publishers 1977
B.Trigger, Ancient Egypt : A Social History. Cambridge University Press, 1983
Bai Shaoyi, An Outline History of China. Beijing : Foreign Languages Press, 1982.
Burns and Ralph, World Civilisations.
Cambridge History of Africa, Vol.I. Cambridge University Press ,1982
G.Clark, World Prehistory: A New Perspective Cambridge University Press ,1977.

Jacquetta Hawkes, First Civilisations. life in Mesopotamia, the Indus Valley and Egypt. The history of human society. New York: Knopf, 1973.

M.I.Finley, The Ancient Economy. University of California Press 1999.

R.J.Wenke, Patterns in Prehistory Oxford University Press, USA; 5th edition 2006 UNESCO Series: History of Mankind, Vols. I –III/ or New ed. History of Humanity.1963

V.Gordon Childe, What happened in History. Peregrine Books 1985

Suggested Readings

A.Hauser, A Social History of Art, Vol I. Routledge, 1999.

Glyn Daniel, First Civilisations. New. York: Thomas Y. Crowell (Apollo. Editions), 1968 J.D. Bernal, Science in History, Vol.I. Cambridge: The MIT Press, Massachusetts Institute of Technology, 1971

Salia Ikram, Death & Burial in Ancient Egypt (American University in Cairo Press, 2015) V.Gordon Childe, Social Evolution.

Martin Bernal, Black Athena; the Afro Asiatic Roots of Classical Civilization Brunswick: Rutgers University Press, 1991.

গর্ডন চাইল্ড, সোশ্যাল ইভলিউশন, অসিত চৌধুবী (ভাষান্তর), দীপায়ন, কলকাতা, ১৪০৫ বঙ্গাব্দ। গর্ডন চাইল্ড, ম্যান মেক্স হিমসেলফ, মগন দাস (ভাষান্তর), দীপায়ন, কলকাতা, ১৯৯৯। গর্ডন চাইল্ড,হোয়াট হ্যাপেনড ইন হিস্টি, দীপায়ন, কলকাতা।

জন ডেসমন্ড বার্নাল, ইতিহাসে বিজ্ঞান, আনন্দ, কলকাতা।

কুণাল চট্টোপাধ্যায় ও সুজাত ভদ্র, প্রাচীন গ্রীসের সমাজ ও ম্নগস্কৃতি, প্রগ্রেসিভ, কলকাতা । সুপ্রতিম দাস, গ্রীস অনুসন্ধান, প্রগ্রেসিভ, কলকাতা ।

CC-3 : History of India C 300 BCE to C 750 CE

I. Economy and Society (circa 300 BCE to circa CE 300)

a)Expansion of agrarian economy : production relations

b)Urban growth: north India, central India and the Deccan; craft Production: trade and trade routes; coinage

c)Social stratification: class, Varna, Jati, untouchability; gender; marriage and property relations.

II. Changing political formations (circa 300 BCE to circa CE 300) :

a)The Mauryan Empire

b)Post-Mauryan Poliities with special reference to the Kushanas and the Satavahanas; Gana-Sanghas

III. Towards early medieval India (circa CE fourth century to CE 750):

a) Agrarian expansion: land grants, changing production relations; graded land rights and peasantry.

b)The problem of urban decline: patterns of trade, currency, and urban settlements.

c)Varna, proliferation of Jatis: changing norms of marriage and property

d) The nature of polities: the Gupta empire and its contemporaries: post-Gupta polities- Pallavas, Chalukyas, and Vardhanas.

IV. Religion, philosophy and society (circa 300 BCE – CE 750)

a)Consolidation of the Brahmanical tradition : dharma, Varnashram, Purushastras, Samskaras.b)Theistic cults (from circa second century BC): Mahayana; the Puranic tradition.c) The beginnings of Tantricism.

V. Cultural developments (circa 300 BCE to circa CE 750):

a)A brief survey of Sanskrit, Pali, Prakrit and Tamil literature. Scientific and technical treatises. b)Art and architecture and forms and patronage; Mauryan, Post-Mauryan, Gupta, Post-Gupta

Essential Readings

Chattopadhyaya B.D, The making of early Medieval India, 1994. Chattopadhyaya B.D, Bharatvarsha and other Essays, Permanent Black, Delhi, 2017. Chattopadhyaya D.P, History of Science and Technology in Ancient India, 1986. Chakravarti Ranabir, Exploring Early India upto AD 1300, Primus, Delhi, 2016. Huntington Susan, The Art of Ancient India: Buddhist, Hindu, and Jain, New York, 1985. Kosambi D.D, An Introduction to the Study of Indian History, 1975. Maity S.K, Economic Life in Northern India in the Gupta Period, 1970. Sahu B.P (ed.), Land System and Rural Society in Early India, 1997. Sastri K.A.N, A History of South India. Sharma R.S, Indian Feudalism, 1980. Sharma R.S, Urban Decay in India, c.300- c1000, Delhi, Munshiram Manohar Lal, 1987 Singh Upinder, A history of Ancient and early Medieval India, 2008. Thapar Romila, Asoka and the Decline of the Mauryas, 1997

Suggested Readings

Agarwal Asvini, The Rise and Fall of the Imperial Guptas, New Delhi, 1988. Bhattacharya N.N, Ancient Indian Rituals ad Their Social Contents, 2nd ed., 1996. Bhattacharya N.N, History of Tantric Religion, 1982 Chakravarti Uma, The Social Dimensions of Buddhism. New Delhi: Oxford University Press, 1987. Chakravarti Uma, Trade and Traders in Early Indian Society, New Delhi, 2007 (revised edition) Champakalakshmi R, Trade, Ideology and Urbanization: South India: 300BC to AD 1300, Delhi, 1996. Chanana D., Slavery in Ancient India as Depicted in Pali and Sanskrit Texts, Delhi, 1960. Gupta P.L, Coins, 4th ed., 1996. Harle J.C, The Art and Architecture of the Indian Subcontinent, 1987. Lahiri Nayanjot, Ashoka in Ancient India, 2015 Majumdar R.C and Altekar A.S eds. The Vakataka Gupta Age, Varanasi, 1955. Mukherjee B.N, Kushana Studies, New Perspectives, Kolkata, 2004 Mukherjee B.N, The Character of the Maurya Empire, Kolkata, 2000 Mukherjee B.N, The Rise and Fall of the Kushana Empire, Calcutta, 1989. Pollock Sheldon, The Language of the Gods in the World of Men. Sanskrit, Culture and Power in Pre-modern India. New Delhi, 2006. Ray H.P, Winds of Change, 1994. Ray Nihar Ranjan, Maurya and Post Maurya Art, New Delhi, 1975. Sharma R.S. Perspectives in the Social and Economic History of Early India, New Delhi, 1983. Shastri A.M ed. The Age of the Vakatakas, Delhi, 1992. Singh Upinder, A History of Ancient and Early Medieval India. Delhi, 2008. Smith Bardwell ed., Essays in Gupta Culture, New Delhi, 1983. Thapar Romila, Asoka and the Decline of the Mauryas, New Delhi, 2000 Thapar Romila, Early India: From the origins to 1300, London, 2002 Thapar Romila, The Mauryas Revisited, Calcutta, 1987. Veluthat Kesavan, The Early Medieval in South India, New Delhi, 2009 রোমিলা থাপার, অশোক ও মৌর্যদের পতন, (Asoka and the Decline of the Mauryas), কে পি বাগচি এন্ড কোং, কলকাতা সুনীল চট্টোপাধ্যায়, প্রাচীন ভারতের ইতিহাস (১ম খন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, একাদশ মুদ্রণ, এপ্রিল ২০০৪ সুনীল চট্টোপাধ্যায়, প্রাচীন ভারতের ইতিহাস (২য় খন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ৮ম মুদ্রণ, ফেব্রুয়ারি ২০০৪ হীরেন্দ্রনাথ মুথোপাধ্যায়, ভারতবর্ষের ইতিহাস (১ম থন্ড) (প্রাচীন ও মধ্যযুগ), পশ্চিমবঙ্গ রাজ্য

পুস্তুক পর্ষদ, প্রথম মুদ্রণ নভেম্বর ১৯৯৭

<u>CC-4 : Social Formations and Cultural patters of the Medieval World other</u> <u>than India</u>

<u>CANDIDATES CAN CHOOSE EITHER GROUP- A OR B, GROUP – C IS</u> <u>COMPULSORY</u>

GROUP-A

I. Arabia: Bedouin Society:

- a) Tribal Organization (families and clans)
- b) System of Alliances
- c) Economic Structure
- d) Language and poetry

II. The Steppes:

- a) A brief outline of Central Asia (Geography and History)
- b) Mongols :
- (i) The strategic location of Mongolia;
- (ii) Mongol Society: Tribal organization, different tribal formations, unification of the tribes under Chenghiz Khan
- (iii) Brief outlines of the Mongol Empire: Case Study: The Golden Horde, Tatar rule in Russia c) The Turks:
- (i) Conversion of the Turks to Islam from Buddhism
- (ii) Brief history of the Seljuks and the Ottomans
- (iii) The rise of the Ottoman Empire
- (iv) Ottoman Society and Administration.

GROUP- B

III. Crisis of the Roman Empire and its principal causes: Historiography

IV. Religion and Culture in Medieval Europe: Society, Religious organizations (Church and Monastery), Carolingian renaissance 12th century renaissance, Position of Women in Medieval Europe, Witchcraft and Magic, Urbanization, Rise of University, Medieval art and architecture.

V. The feudal society its origins and its crisis: Historiography

GROUP- C

VI. Judaism and Christianity under Islam

Essential Reading:

Ali, Syed Ameer, A Short History of the Saracens, Macmillan, 1900.

Allsen, Thomas T., Culture and Conquest in Mongol Eurasia (Cambridge), Cambridge University Press, March 2004.

Baker, Simon, Ancient Rome The Rise and Fall of an Empire, Ebury Publishing, 2006.

Barthold, V., A Secret History of the Mongols, Cheng & Tsui Co, June 1999.

Biran Michael, The Empire of the Qara Khitai in Eurasian History Between China and the Islamic World, Cambridge University Press, June 2008.

Bloch, Marc, Feudal Society (2 Vols), Aakar Books, Revised Edition, July, 2017.

Brundage (ed.), The Crusades, Marquette University Press, 1962.

Burke, Edmund, III & Ira M. Lapidus, Islam, Politics and Social Movements, University of California Press, 1988.

Burke, Peter, Popular Culture, Ashgate Publishing Ltd, 2009.

Cohen, Mark, Under Crescent and Cross The Jews in the Middle Ages, Princeton University Press, 2008.

Deansley, Margaret, A History of Early Medieval Europe, 476 to 911, Methuen, 1956. Dobb, Maurice Dobb, Studies in the Development of Capitalism, Routledge, First Edition, March, 1965.

Goff, Le, Medieval Civilizations (400-1500), Blackwell Publishing, August 1991.

Hitti, Philip K., History of the Arabs, Macmillan Education Ltd., First Edition, 1937.

Inalcik, Halil, The Ottoman Empire, Phoenix, December 2001.

Lewis, Bernard, The Arabs in History, Oxford University Press, 6th Edition, May 2002. Lewis, Bernard, The Jews of Islam, 1984.

Man, John, The Mongol Empire, Penguin Random House, May 2015.

Pirenne, Heim, Medieval Cities, Princeton University Press, 1969.

Smith, Leslie and Leyser, Conrad; Motherhood, Women and Society in Medieval Europe (400-1400), Ashgate Publishing Ltd, 2011.

Stuard, Susan Mosher (Ed.), Women in Medieval History and Historiography, University of Pennsylvania Press; New edition, December, 1988.

<u>CC-5 : History of India (CE 750 – 1206)</u>

I. Studying Early Medieval India:

Historical geography sources: texts, epigraphic and numismatic data. Debates on Indian Feudalism, rise of the Rajputs and the nature of the state.

II. Political Structures:

a) Evolution of political structures: Rashtrakutas, Palas, Pratiharas, Rajputs and Cholas.

b) Legitimization of kingship; Brahmanas and temples; royal genealogies and rituals

c)Arab conquest of Sindh : nature and impact of the new set-up; Ismaili Dawah

d) Cause and consequences of early Turkish invasions : Mamud of Ghazna; Shahab-ud-Din of Ghur.

III. Agrarian structure and social change:

a) Agricultural expansion; cropsb)Landlords and peasantsc)Proliferation of castes: status of untouchables

d) Tribes as peasants and their place in the Varna order

IV. Trade and Commerce

- a) Inter-regional trade
- b) Maritime trade
- c) Forms of exchange

d)Process of urbanization

e)Merchant guilds of South India

V. Religious and Cultural developments:

a)Bhakti, Tantrism, Puranic traditions; Buddhism and Jainism; Popular religious cults.

b) Islamic intellectual traditions: Al-Biruni; Al-Hujwiri

c)Regional languages and literature

d)Art and architecture: Evolution of regional styles.

Essential Readings

Chattopadhyaya, B.D, The Making of Early Medieval India, 1994.

Karashima, N., South Indian History and Society (Studies from Inscriptions, AD 850 – 1800) Kulke, Hermann, ed., The State in India (AD 1000 – AD 1700)

Sharma, R.S and Shrimali, K.M eds., Comprehensive History of India, Vol. IV (A & B) Sharma, R.S. Indian Feudalism (circa 300 – 1200)

Singh, Vipul Interpreting Medieval India, Volume-I, Early Medieval, Delhi Sultanate and Regions (circa 750 – 1550), 2009.

Suggested Readings :

Basham, A.L., (ed.), A Cultural History of India Basham, A.L., The Wonder that was India Bose Mandakranta (ed.), Faces of Feminine in Ancient Medieval and Modern India, New York, 2000 Chakravarti Ranabir, Exploring Early India upto Circa AD 1300 Chakravarti, R(ed.), Trade in Early India, Delhi Champalakshmi, R, Trade, Ideology and Urbanisation :South India 300 BC - AD 1300, Delhi, 1966 Chandra, S, History of Medieval India (800 -1700) Chattopadhyay, B.D., Aspects of Rural settlements and Rural Society in Early Medieval India Chattopadhyay, B.D, Science and Society in Ancient India, Calcutta, 1977 Chattopadhyay, B.D, Studying Early India: Arcchaeology, Texts and Historical Issues, New Delhi, 2003 Chaudhuri, K.N, Trade and Civilisation in the Indian Ocean : An Economic History from the Rise of Islam to 1750 Gopal Lalanji, The Economic Life of Northern India, Varanasi, 1965 Habib, Irfan, Economic History of Medieval India: A Survey, New Delhi, 2001 Habib, Irfan, Medieval India: The Study of a Civilisation, New Delhi, 2008 Habib, Md. And Nizami KA (eds), A Comprehensive History of India Vol. V Habibullah, A.B.M, The Foundation of Muslim Rule in India Jackson, Peter, The Delhi Sultanate: A Political & Military History, Cambridge, 1999 Jha D.N (ed), The Feudal Order, New Delhi, 2000 Kulke, H., The State in India (1000-1700) Majumdar R.C and Dasgupta K.K.(eds), A Comprehensive History of India Vol.III Majumdar R.C. et al (eds), History and Culture of the Indian People Vol. IV and Vol. V Meister M.M & Dhaky MA, Indian Temple Architecture, Delhi, 1983 Mukherjee B.N, Post-Gupta Coinages of Bengal, Calcutta, 1989 Mukhia, H., The Feudalism Debate Rakaswami Vijaya, Walking Naked: Women, Society, Spirituality in South India (Simla, 1997) Ray H.C, Dynastic History of Northern India (New Delhi, 1973) Ray Nihar Ranjan et al ed., A Source Book of Indian Civilisation (Kolkata, 2000) Rizvi, S.A.A, The Wonder that was India, Vol. II Roy Kumkum (ed), Women in Early Indian Societies (New Delhi, 1999) Sastri, K.A. Nilkanta, A History of South India from Prehistoric Times to the Fall of Vijaynagar, Sastri K.A. Nilkantha, The Cholas (Madras, 1975 [reprint]) Sastri, K.A. Nilkanta (ed), A Comprehensive History of India Vol. II Sharma R.S, Early Medieval Indian Society: A Study in Feudalisation, Delhi, 2001. Sharma R.S, Indian Feudalism, University of Calcutta, 1965.

Sharma R.S, Perspectives in the Social and Economic History of Early India, New Delhi, 1983. Sharma, R.S, Early Medieval Indian Society: A Study in Feudalisation (Delhi, 2001)

Sharma, R.S. Indian Feudalism

Singh Upinder ed., Rethinking Early Medieval India : A Reader, 2011

Singh Upinder, A History of Ancient and Early Medieval India. Delhi, 2008.

Thapar Romila, Early India: From the Origins to AD 1300, London, 2002

Thapar, R; Early India

Veluthat, K; The Political Structure of Early Medieval South India

India and the Expansion of Islam 7-11 century, 1990

Yadava, B.N.S, Society & Culture in North India in the 12th century

Yazdani, G., (ed), The Early History of the Deccan

বাশাম এ এল, অতীতের উজ্জ্বল ভারত, (The Wonder That Was India), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৫

মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস (১ম থন্ড) (প্রাচীন ও মধ্যযুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, প্রথম মুদ্রণ নভেম্বর ১৯৯৭

ভট্টাচার্য, নরেন্দ্রনাথ, ধর্ম ও সংস্কৃতিক প্রাচীন ভারতীয় প্রেক্ষাপট

চক্রবর্তী রণবীর, প্রাচীন ভারতের অর্থনৈতিক ইতিহাসের সন্ধানে, আনন্দ পাবলিশার্স, কলকাতা ২০০২

চক্রবর্তী রণবীর, ভারত ইতিহাসের আদি পর্ব, ওরিয়েন্ট লংম্যান,কলকাতা, ২০০৭

সেন সমরেন্দ্রনাথ, বিজ্ঞানের ইতিহাস, শৈব্যা প্রকাশন, ১৯৯৬

শর্মা রামশরণ, ভারতের সামন্ততন্ত্র, (Indian Feudalism), কে পি বাগচি এন্ড কোং, কলকাতা

শর্মা রামশরণ, আদি মধ্যযুগের ভারতীয় সমাজ: সামন্ত-প্রক্রিয়া বিষয়ে এক সমীক্ষা(Early Medieval Indian Society: A Study in Feudalisation), ওরিয়েন্ট লংম্যান, ২০০৩

CC-6 : Rise of the Modern West - I

- **I**. Transition Debate on transition from feudalism to capitalism: problems and theories.
- **II** a) The exploration of the new world: motives.
 - **b**.) Portugese and Spanish voyages.
- **III**. a) Renaissance : its social roots
 - b.) Renaissance humanism
 - c.) Rediscovery of classics
 - d.) Italian renaissance and its impact on art, culture, education and political thought.
 - e.) Its spread in Europe

IV. a) Reformation movements: Origins & courses

- b.) Martin Luther & Lutheranism
- c.) John Calvin & Calvinism
- d.) Radical reformation: Anabapists and Huguenots
- e.) English reformation and the role of the state
- f.) Counter Reformation

V. a) Economic developments

- b.) Shift of economic balance from the Mediterranean to the Atlantic
- c.) Commercial Revolution
- d.) Price Revolution
- e.) Agricultural Revolution and the Enclosure Movement

VI. a) Development of national monarchy

b.) Emergence of European state system

Essential Readings

Butterfield H., The Origins of Modern Science. The Macmillan Company. 1959

Cipolla Carlo M., Fontana Economic History of Europe, Vols. II and III Collins/ Fontana Books; 1978

Cipolla Carlo M., Before the Industrial Revolution, European Society and Economy, 1000-1700, W. W. Norton & Company; 3rd edition 1994

Coleman D.C (ed.), Revisions in Mercantilism Methuen & Co, 1969.

Davis Ralph, The Rise of the Atlantic Economics. Cornell University Press, 1973

Dobb Maurice, Studies in the Development of Capitalism, International Publishers, 1947

Parker G., Europe in Crisis, 1598-1648 Ithaca, N.Y.: Cornell University Press. 1980

Parry, J.H., The Age of Reconnaissance University of California Press, 1981

Phukan Meenaxi, Rise of the Modern West: Social and Economic History of Early Modern Europe. Laxmi Publications 2013

Poliensky.V, war and Society in Europe, 1618-48 Cambridge University Press, 2008

Rabb Theodore K., The Struggle for Stability in Early Modern Europe. Oxford University Press, 1975

Scammell V., The First Imperial Age: European Overseas expansion, 1400-1715. Routledge, 2003

Vries Jan de, Economy of Europe in an Age of Crisis 1600-1750. New York: Cambridge University Press, 1976

Suggested Readings :

Anderson M.S, Europe in the Eighteenth Century Holt, Rinehart and Winston, 1961 Anderson, Perry, The lineages of the Absolutist States. Verso, 1979 Aston, T.H and Philipin C.H.E (eds.), The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe, Cambridge University Press, 2005. Bernal J.D, Science in History Cambridge: The MIT Press, 1954 Burke, Peter, The Renaissance . Humanities Press International, 1987 Camerson, Euan (ed.), Early Modern Europe: An Oxford History, Oxford University Press 2001. Dunn Rechard S., The Age of Religious Wars, 1559-1715, W.W.Norton & Company, 2004 Elton, G.R., Reformation Europe, 1517-1559 Wiley, 1999 Gilmore, M.P., The World of Humanism, 1453-1517 New York, Harper 1952 Hall, R., From Galileo to Newton Courier Corporation, 1981 Hill, Christopher, A century of Revolutions. Psychology Press, 2002 Hilton, Rodney, Transition from feudalism to Capitalism, Aakar Books, 2006 Koenigsberger, H.G and Mosse, G.L., Europe in the Sixteenth Century. Longmans, 1961 Lee, Stephen J., Aspects of European History, 1494-1789 Routledge, 1982 Parker, G. and Smith, L.M., General Crisis of the Seventeenth Century. Boston : Routledge & Kegan Paul, 1978. Pennington, D.H., Seventeenth Century Europe. Longman, 1972 Rabb, Theodore K., The Struggle for Stability in Early Modern Europe. Oxford University Press, 1975 Rice, Eugene F. and Grafton, Anthony, The Foundations of Early Modern Europe, 1460-1559, W.W.Norton & Company, 2004. The Cambridge Economic History of Europe, Vol.I, IV Cambridge University Press 1944 The New Cambridge Economic History of Europe, Vol.I, VII. ত্রিপাঠী অমলেশ, ইতালির রেনেসাঁস বাঙালির সংস্কৃতি, আনন্দ পাবলিশার্স, কলকাতা ১৯৯৪ দাশগুপ্ত অশীন, ভারত মহাসাগরে বাণিজ্য ও রাজনীতি ১৫০০-১৮০০, আনন্দ পাবলিশার্স, কলকাতা, ১৯৯৯ বার্নাল জে ডি, ইতিহাসে বিজ্ঞান, (Science in History), আনন্দ পাবলিশার্স, কলকাতা, ২০০৫ সেন সমরেন্দ্র, বিজ্ঞানের ইতিহাস, শৈব্যা প্রকাশন, কলকাতা, ১৯৯৬

ভট্টাচার্য স্নেহাদ্রি, ইংলন্ডের ইতিহাস (টিউডর যুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা, ১৯৯৫ চক্রবর্তী ভাস্কর, চক্রবর্তী সুভাষ রঞ্জন এবং চট্টোপাধ্যায় কিংশুক, ইউরোপে যুগান্তর, নবভারতী প্রকাশনী, কলকাতা, ২০০৫

মুখার্জী রীলা, রূপান্তরিত ইউরোপ(৯০০ - ১৮০০), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৪

CC-7 : HISTORY OF INDIA (c.1206-1526)

I. Interpreting the Delhi Sultanate:

Survey of sources: Persian tarikh tradition; vernacular histories; epigraphy

II. Sultanate Political Structures:

- a. Foundation, expansion and consolidation of the Sultanate of Delhi; the Khaljis and the Tughluqs; Mongol threat and Timur's invasion; Rise and fall of Syed dynasty; The Lodis; Conquest of Bahlul and Sikandar; Ibrahim Lodi and the battle of Panipat;
- b. Theories of Kingship; Ruling elites; Sufis, Ulama and the political authority; imperial monuments and coinage
- c. Emergence of provincial dynasties: Bahamanis, Vijayanagar, Gujarat, Malwa, Jaunpur and Bengal
- d. Consolidation of regional identities: regional art, architecture and literature

III. Society and Economy:

a. Iqta and the revenue-free grants

- b. Agriculture production; technology
- c. Changes in rural society; revenue systems

d. Monetization; market regulations; growth of urban centres; trade and commerce; Indian Ocean trade

IV. Religion and Culture:

- a. Sufi silsilas: Chishtis and Suhrawardis; doctrines and practices; social roles.
- b. Bhakti movements and monotheistic traditions in South and North India; Women Bhaktas;
 - Nathpanthis; Kabir, Nanak and the Sant tradition
- c. Sufi literature; Malfuzat; Premakhayans
- d. Architecture of the Delhi Sultanate

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Asher, Catherine and Talbot Cynthia, India before Europe, Cambridge University Press, March 2006.

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Hasan Mohibul, Historians of Medieval India, Meenakshi Prakashan, 1968.

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Nizami K.A., Some Aspects of Religion and Politics in India During the 13th Century, Aligarh, 1961.

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Academic Publishers, 2nd Edition, 1991.

রায় মিহিরকুমার, ভারতের ইতিহাস (তুরক-আফগান যুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, দ্বিতীয় মুদ্রণ, ফেব্রুয়ারী ১৯৯২

হাবিব ইরফান, মধ্যযুগের ভারতের অর্থনৈতিক ইতিহাস, (Economic History of Medieval India: A Survey), প্রগ্রেসিভ পাবলিশার্স

হাবিব ইরফান, মধ্যকালীন ভারত ১-৪ থন্ড (Medieval India)কে পি বাগচি এন্ড কোং, কলকাতা হাবিবুল্লাহ এ বি এম, ভারতে মুসলিম শাসনের প্রতিষ্ঠা ১২০৬-১২৯০, (The Foundation of Muslim

Rule in India), প্রগ্রেসিভ পাবলিশার্স, কলকাতা

রায় অনিরুদ্ধ ও চট্টোপাধ্যায় রন্নাবলী, মধ্যযুগে বাংলার সমাজ ও সংস্কৃতি, কে পি বাগচি এন্ড কোং, কলকাতা ১৯৯২

রায় অনিরুদ্ধ, মধ্যযুগের ভারতের ইতিহাস: সুলতানি আমল, ওরিয়েন্ট লংম্যান, কলকাতা করিম আব্দুল, বাংলার ইতিহাস: সুলতানি আমল, ঢাকা

CC-8 : Rise of the Modern West - II

- **I. a)** Printing Revolution.
 - b) Revolution in war techniques
- II. a.) Crisis in Europe in the 17th century
 b.) Its economic, social and political dimensions
- **III.** a.) The English Revolution : major issues
 - b.) Political and intellectual issues
- IV. a.) Scientific Revolution
 - b.) Emergence of scientific academies
 - c.) Origins of Enlightenment

Va.) Mercantilism and European economics

b.) Preludes to the Industrial Revolution

- **VI. a**). European Politics in the 17th & 18th Century
 - b.) Parliamentary monarchy
 - c.) patterns of Absolutism in Europe

Essential Readings

Butterfield H., The Origins of Modern Science. The Macmillan Company. 1959 Cipolla Carlo M., Fontana Economic History of Europe, Vols. II and III Collins/ Fontana Books;

1978 Cipolla Carlo M., Before the Industrial Revolution, European Society and Economy, 1000-1700, W. W. Norton & Company; 3rd edition 1994

Coleman D.C (ed.), Revisions in Mercantilism Methuen & Co, 1969.

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Aston, T.H and Philipin C.H.E (eds.), The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe, Cambridge University Press, 2005.

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দানগুর অনান, ভারত মহাসাগরে বালজ্য ও রাজনাতি ১৫০০-১৮০০, আনন্দ পাবালনাস, কলকাতা, ১৯৯৯ বার্নাল জে ডি, ইতিহাসে বিজ্ঞান, (Science in History), আনন্দ পাবলিশার্স, কলকাতা, ২০০৫ সেন সমরেন্দ্র, বিজ্ঞানের ইতিহাস, শৈব্যা প্রকাশন, কলকাতা, ১৯৯৬ ভট্টাচার্য স্লেহাদ্রি, ইংলন্ডের ইতিহাস (টিউডর যুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা, ১৯৯৫

চক্রবর্তী ভাষ্ণর, চক্রবর্তী সুভাষ রঞ্জন এবং চট্টোপাধ্যায় কিংশুক, ইউরোপে যুগান্তর, নবভারতী প্রকাশনী, কলকাতা, ২০০৫

মুখার্জী রীলা, রূপান্তরিত ইউরোপ(৯০০ - ১৮০০), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৪

<u>CC-9 : History of India (c 1526 – 1605)</u>

I. Sources and Historiography:

a) Persian literary culture; translations; Vernacular literary traditions.b)Modern Interpretations

II. Establishment of Mughal rule:

- a) India on the eve of Babur's Invasion
- b) Fire arms, military technology and warfare
- c) Humayun's struggle for empire
- d) Sher Shah and his administrative and revenue reforms

III. Consolidation of Mughal rule under Akbar:

- a) Campaigns and conquests: tactics and technology
- b) Evolution of administrative institutions : Zabt, Masnab, Jagir, Madad-I-Maash
- c) Revolts and resistance

IV. Expansion and Integration:

a)Incorporation of Rajputs and other indigenous groups in Mughal nobility.b)North-West frontier, Gujarat and the Deccanc) Conquest of Bengal

V. Rural Society and Economy:

a)Land rights and revenue system; Zamindars and Peasants; rural tensionsb)Extension of agriculture; agricultural production; crop patternsc) Trade routes and patterns of internal commerce; overseas trade; rise of Surat

VI. Political and religious ideals:

a)Inclusive political ideas: theory and practiceb) Religious tolerance and Sulh-i-kul; Sufi mystical and intellectual interventionsc)Pressure from the Ulama

Readings

For readings – see the listing given in Paper -10

<u>CC-10: History of India (c 1605 – 1750s)</u>

I. Sources: Persian and vernacular literary cultures, histories, memoirs and travelogues II. Political Culture under Jahangir and Shah Jahan

a) Extension of Mughal rule; changes in Mansab and Jagir systems; imperial culture

b) Orthodoxy and syncretism - Naqshbandi Sufis, Miyan Mir, Dara Shukoh, Samrad

III. Mughal Empire under Aurangzeb

a) State and religion under Aurangzeb; issues in the war of succession; policies regarding religious groups and institutions

b) Conquests and limits of expansion

c) Beginning of the crisis: contemporary perceptions; agrarian and Jagir crises; revolts.

IV. Visual Culture: Paintings and Architecture

V. Patterns of Regional Politics:

a) Rajput political culture and state formation

b) Deccan kingdoms; emergence of the Marathas; Shiva; expansion under the Peshwas

- c) Mughal decline; emergence of successor states
- d) Interpreting eighteenth century India: recent debates

V. Trade and Commerce

a)Crafts and technologies; Monetary system

b) Markets, transportation, urban centres

c) Indian Ocean trade network

Essential Readings

Alam Muzaffar and Subramaniam Sanjay , eds., The Mughal state, 1526-1750 Ali Athar M., The Mughal Nobility under Aurangzeb Chandra Satish, Essays on Medieval Indian History Dasgupta Ashin, Indian Merchants and the Decline of Surat, 1700 – 1750 Gordon Stewart, The Marathas 1600 – 1818 Habib Irfan, Agrarian System of Mughal India, 1526 – 1701 Koch Ebba, Mughal Art and Imperial Ideology Qanungo, K.R, Dara Shukoh Richards, J.F, The Mughal Empire Rizvi, S.A.A, Muslim Revivalist Movements in Northern India.

Suggested Readings

Alam, Muzaffar-The Crisis of Empire in Mughal North India: Awadh and Punjab-1707-1748.
Alavi,Seema (ed.), The Eighteenth Century in India
Ali, M. Athar, Mughal India: Studies in Polity, Ideas, society and Culture.
Arasaratnam S., Maritime India in the Seventeenth Century
Asher Catherine, Architecture of Mughal India
Bandyopadhya S, From Plassey to Partition
Barnett,R.B, North India between Empires: Awadh, the Mughals and the British.
Bashir, Ahmed, Akbar, the Mughal Emperor.
Bayly, Susan, Caste, Society and Politics in India from the 18th century to the modern age.
Bayly,C.A., Indian Society and the Making of the British Empire;
Beach Milo, Mughal and Rajpur Paintings

Bernier, F, Travels in Mughal India. Chandra Satish, Parties and Politics at the Mughal Court Chandra, Satish, A History of Medieval India (Part II) Chandra, Satish, Historiography, Religion and State in Medieval India Chandra, Satish, Mughal Religious Policies, the Rajputs and the Deccan. Chandra, Satish, The 18th century in India: Its economy and the Role of the Marathas, the jats and the Sikhs and the Afghans and Supplement (K.P.Bagchi) Chaudhuri, K.N., Trade & Civilization: An Economic History from the Rise of Islam to 1750. Eaton, R.M., The Rise of Islam and the Bengal Frontier 1204-1760; Eaton, R.M., The Sufis of Bijapur Fukuzawa,H., The Medieval Deccan: Peasants, Social systems and States 16th to 18th centuries. Gordon S., The Marathas 1600-1818 Grewal J.S., The Sikhs of the Punjab Habib Irfan(ed.), Medieval India Habib Irfan (ed), Resistance and Modernization under Haider Ali and Tipu Sultan Hasan S., Nurul, Thoughts on Agrarian Relations in Mughal India Hasan S.Nurul, Reliogn, State, and Society in Medieval India Husain Igbal, Ruhela Chieftancies in 18th Century India Kulke, H.(ed.), The State in India 1000-1700. Malik, Z.U, The Reign of Muhammad Shah Marshall P J., (Edited), The Eighteenth century in Indian history: Evolution or revolution Marshall P J., East Indian Fortunes: the British in Bengal in the 18th Cent, Mukhia Harbans, The Mughals of India Nizami K.A., (ed.) Politics and society during the early Medieval Period : The collected Works of Prof. Md. Habib (2 vols.) Raychoudhuri T.K. & Habib I. (eds.)-The Cambridge Economic History of India Vol.1 **Richards J.F., The Mughal Empire** Richards, J.F. Mughal Administration in Golconda Rizvi S.A.A., A History of Sufism in India Rizvi S.A.A., The Wonder that was India (vol.2); Sarkar, Sir J.N., History of Aurangzeb 5 vols. Sarkar, Sir J.N., The Fall of the Mughal Empire, 4 vols. Siddiqi. N.A., Land Revenue Administration Under the Mughals (1700-1750) Stein, Burton, Eighteenth Century in India: Another view (Studies in History, No.I, 1989) Stein, Burton, Peasant, State and Society in Medieval South India (Oxford University Press) Streusand D.F., The Formation of the Mughal Empire Tripathi R.P., Some Aspects of Muslim Administration Tripathi R.P., The Rise & Fall of the Mughal Empire Wink, Andre, Land and Sovereignty in India: Agrarian society and politics under the eighteenth century Maratha Swarajya. আলি এম আখার, আওরঙ্গজেবের সময়ে মুঘল অভিজাত শ্রেণী (The Mughal Nobility under Aurangzeb) কে পি বাগচি এন্ড কোং, কলকাতা

বল্দ্যোপাধ্যায় শেখর, অষ্টাদশ শতকের মুঘল সংকট ও আধুনিক ইতিহাস চিন্তা, কলকাতা, ১৯৮৩ ভদ্র গৌতম, মুঘল যুগে কৃষি অর্থনীতি ও কৃষক বিদ্রোহ, সুবর্ণরেখা, কলকাতা, ১৯৮৩ চন্দ্র সতীশ, মুঘল দরবারে দল ও রাজনীতি, (Parties and politics at the Mughal Court 1707-1740) কে পি বাগচি এন্ড কোং, কলকাতা চৌধুরী বিনয় ভূষণ ও অন্যান্যরা, বাংলার কৃষি সমাজের গঠন, কে পি বাগচি এন্ড কোং, কলকাতা হাবিব ইরফান, মধ্যকালীন ভারত, খন্ড ১-৪, কে পি বাগচি এন্ড কোং, কলকাতা হাবিব ইরফান, মুঘল সাম্রাজ্য ও তার পতন- একটি সমীক্ষা, পশ্চিমবঙ্গ ইতিহাস সংসদ,২০০০ হাবিব ইরফান, মুঘল ভারতের কৃষি ব্যবস্থা, (The Agrarian System of Mughal India (1556-1707)), কে পি বাগচি এন্ড কোং, কলকাতা হাবিব ইরফান, মধ্যযুগের ভারতের অর্থনৈতিক ইতিহাস, (Economic History of Medieval India: A Survey), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৯ হাবিব ইরফান, ভারতের ইতিহাস প্রসঙ্গঃ মার্কসীয় চেতনার আলোকে (Essays in Indian History: Towards a Marxist Perception), ন্যাশনাল বুক এজেন্সি, কলকাতা, ১৯৯৯ রায় অনিরুদ্ধ, মধ্যযুগের ভারতের অর্থনৈতিক ইতিহাস, ১২০০-১৭৫৭, প্রগ্রেসিভ পাবলিশার্স, কলকাতা রায় অনিরুদ্ধ, মুঘল যুগের অর্থনৈতিক ইতিহাস, কে পি বাগচি এন্ড কোং, কলকাতা সরকার জগদীশ নারায়ণ, মুঘল অর্থনীতিঃ সংগঠন এবং কার্যক্রম, (Mughal Economy : Organisation and Working) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা ১৯৯১ সিদিকী নোমান আহমেদ, মোঘল রাজত্বে ভুমিরাজস্ব পরিচালন ব্যবস্থা (১৭০০ - ১৭৫০)(Land Administration Under the Mughals (1700 -1750) পার্ল পাবলিশার্স, কলকাতা, ১৯৮০ মৃথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস (২য় থন্ড) (মুঘল ও ব্রিটিশ ভারত,পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ,কলকাতা ১৯৯৮ চট্টোপাধ্যায় রত্নাবলী, মুঘল যুগের দরবারি চিত্রকলা, খীমা, কলকাতা

CC-11: History of Modern Europe (c.1780 – 1939)

I. The French Revolution and its European repercussions:

a) Crisis of *ancien regime*

b) Intellectual currents

c) Social classes and emerging gender relations.

d) Phases of the French Revolution

e)Art and Culture of French Revolution

f)Napoleonic consolidation – reform and empire.

II. Restoration and Revolution: c.1815 - 1848

a) Forces of conservatism and restoration of old hierarchies.

b) Social, Political and intellectual currents.

c) Revolutionary and Radical movements, 1830 -1848

III. Capitalist Industrialization and Social and Economic Transformation (Late 18th century to AD 1914)

a) Process of capitalist development in industry and agriculture: case studies of Britain, France, the German States and Russia.

b) Evolution and Differentiation of social classes : Bourgeoisie, proletariat, Land Owning classes and peasantry.

c) Changing trends in demography and urban patterns

d)Family, gender and process of industrialization.

IV. Varieties of Nationalism and the Remaking of States in the 19th and 20th centuries.

a)Intellectual currents, popular movements and the formation of National identities in Germany, Italy, Ireland and the Balkans.

b) Specifications of economic development, political and administrative Reorganization – Italy; Germany.

c) Revolutions of 1905; the Bolshevik Revolution of 1917

d) Programme of Socialist Construction and the Soviet Union during the inter-war period 1918-39.

V. Imperialism, War and Crisis: c.1880 - 1918

- a) Theories and mechanisms of imperialism;
- b) Growth of Militarism;
- c) Power blocks and alliances;
- d) Expansion of European empires
- e) War of 1914 1918

VI. Europe between Two World Wars:

a) Post War Europe: A Diplomatic History

b) The Great Depression

c) Rise of Fascism in Italy and Nazism in Germany

d) The Spanish Civil War

e) Policy of Appeasement and Russo German Non-Aggression Pact

f) Origins and Course of the Second World War

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Brennan Gerald, The Spanish Labyrinth: An Account of the Social and Political Background of the Civil War. Cipolla C.M, Fontana Economic History of Europe, Volume III: The Industrial Revolution Davies Norman, Europe Evans J., The Foundations of a Modern State in 19th Century Europe Hamerow T.S, Restoration, Revolution and Reaction : Economics and Politics in Germany [1815 - 1871] Hobsbawn, E.J, The Age of Revolution Hunt Lynn, Politics, Culture and Class in the French Revolution Joll James, Europe Since 1870 Landes David; Prometheus Unbound Lefebvre George, Coming of the French Revolution Lichteim, A Short History of Socialism Mathias Peter, First Industrial Revolution Nove, Alec: An Economic History of the USSR Porter Andrew, European Imperialism, 1876 – 1914 Wood Anthony, History of Europe, 1815 – 1960 Woolf Stuart, History of Italy, 1700 to 1860 **Suggested Readings**

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Lowenthal David, The Past is a Foreign Country Lyon Martin, Napoleon Bonaparte & the Legacy of the French Revolution Mansergh Nicholas, The Irish Question, 1840 – 1921 Morgan K.O, Oxford Illustrated History of Britain, Volume 3 (1789-1983) Morgan R.P, German Social Democracy and the First International Perrot M. and Duby G. [eds.], A History of Women in the West, Volumes 4 and 5 Renton Dave, Fascism: Theory and Practice Riasanovsky N.V, A History of Russia Robert J.M, Europe 1880 to 1985 Roth J.J (ed), World War I: A Turning Point in Modern History Rude, George, Revolutionary Europe Schamma Simon, Citizens: A chronicle of the French Revolution Soboul Albert, History of the French Revolution (in two Volumes) Stone Lawrence, History and the Social Sciences in the twentieth Century, The Past and the Present, 1981 Taylor A.J.P, Europe: Grandeur and Decline Taylor A.J.P, The Course of German History Taylor A.J.P, The Origin of the Second World War Taylor, A.J.P, The Struggle for Mastery in Europe Thompson Dorothy; Chartists: Popular Politics in the Industrial Revolution Thompson, E.P, Making of the English Working Class Thomson, David, Europe Since Napoleon Vovelle Michael, Fall of the French Monarchy, 1984. Watson H. Seton, The Russian Empire Watson, Seton, The Russian Empire Williams Raymond, Culture and Society

গৌতম চট্টোপাধ্যায় সম্পাদিত: দু'শো বছরের আলোকে, পশ্চিমবঙ্গ ইতিহাস সংসদ, ১৯৮৯ চক্রবর্তী সুভাষ রঞ্জন, ফরাসী বিপ্লব, পশ্চিমবঙ্গ পুস্তুক পর্ষদ, কলকাতা চক্রবর্তী সুভাষ রঞ্জন, ইউরোপের ইতিহাস, পশ্চিমবঙ্গ পুস্তুক পর্ষদ, কলকাতা, ১৯৮৬ জ্যাকসন টি এ, ফরাসী বিপ্লব - দশ দিগন্তু, কে পি বাগচি এন্ড কোং, কলকাতা ২০০৪ টমসসন ডেভিড, বিশ্ব ইতিহাসের প্রেক্ষাপটে ইউরোপ, ১ম খন্ড (১৭৮৯–১৮৫০), ২য় খন্ড (১৮৫১–১৯১৪) প্রগ্রেসিভ পাবলিশার্স, কলকাতা ২০০২ ও ২০০৩ রায় সিদ্ধার্থ গুহ, আধুনিক ইউরোপঃ ফরাসী বিপ্লব থেকে দ্বিতীয় বিশ্বযুদ্ধ, প্রগতিশীল প্রকাশক, কলকাতা, ২০১৩

<u>CC-12: History of India (c 1750s – 1857)</u>

I. India in the mid 18th Century; Society, Economy, Polity

II. Expansion and Consolidation of Colonial Power :

a) Mercantilism, foreign trade and early forms of exactions from Bengal

b) Dynamics of expansion, with special reference to Bengal, Mysore, Western India, Awadh, Punjab and Sindh.

III. Colonial State and Ideology:

a) Arms of the colonial state : army, police, law

- b) Ideologies of the Raj and racial attitudes.
- c) Education : indigenous and modern.

IV. Rural Economy and Society:

- a) Land revenue systems and forest policy
- b) Commercialization and indebtedness
- c) Rural society : change and continuity.

d) Famines

e)Pastoral economy and shifting cultivation.

V. Trade and Industry

a)De industrialization

b)Trade and fiscal policy

c) Drain of Wealth

d) Growth of modern industry

VI. Popular Resistance:

a) Santhal uprising (1857); Indigo rebellion (1860); Pabna Agrarian Leagues(1873); Deccan riots (1875)
b) Uprising of 1857

b) Uprising of 1857

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Bayly C.A, Indian Society and the Making of the British Empire, New Cambridge History of India. Bhattacharya, Sabyasachi.ed., Rethinking 1857, Delhi, Orient Longman, 2007 Chakravarty Suhash, The Raj Syndrome: A study in Imperial Perceptions, 1989 Chandra Bipan, Rise and Growth of Economic Nationalism in India Choudhury, Sushil, Prelude to Empire Plassey Revolution of 1757, Delhi: Manohar, 2000 Cohn, B., Colonialism and its Forms of Knowledge, Princeton, New Jersey, Princeton University Press, 2001 Dirks, Nicholas B., Castes of Mind, Princeton, New Jersey, Princeton University Press, 1996 Ghosh Suresh Chandra, The History of Education in Modern India 1757-2012, Delhi, Orient Blackswan, 4th Edition, 2013 Grewal, J.S, The Sikhs of the Punjab, New Cambridge History of India Guha Ranajit, ed., A Subaltern Studies Reader Guha, Ranajit, Elementary Aspects of Peasant Insurgency in Colonial India, New Delhi, Oxford University Press, 1983 Kumar Dharma and Raychaudhuri Tapan, eds., The Cambridge Economic History of India, Vol.II

Majumdar, R.C,ed., History and Culture of Indian People, Vols. IX and X, British Paramountcy and Indian Renaissance. Marshall, P.J, Bengal: The British Bridgehead, New Cambridge History of India Metcalfe, Thomas, Ideologies of the Raj, Cambridge, Cambridge University Press, 1995

Ray, Rajat K., ed., Entrepreneurship and Industry in India, 1800-1947, Oxford In India Readings.

Sinha, N.K.ed, The history of Bengal 1757-1905, Calcutta, Calcutta University Press, 1967 Stokes, Eric, English Utilitarians and India

Stokes, Eric, The Peasant Armed: The Indian Rebellion of 1857, ed. Bayly, C.A, New Delhi, Oxford University Press, 1986

Suggested Readings

Arnold David and Guha Ramchandra , eds., Nature, Culture and Imperialism
Bagchi, Amiya, Private Investment in India
Chandra Bipan, Panikkar, K.K, Mukherjee Mridula, Mahajan Sucheta and Mukherjee Aditya,
India's Struggles for Independence.
Dadabhai Naroji, Poverty and Un-British Rule in India.
Desai, A.R, Peasant Struggles in India
Dutt, R.P, India today
Fisher, M.J, ed., Politics of Annexation (Oxford in India Readings).
Guha Ranajit, Elementary Aspects of Peasant Insurgency in Colonial India(1983)
Krishnamurti, J., Women in Colonial India.

বন্দ্যোপাধ্যায় শেখর, অষ্টাদশ শতকের মুঘল সংকট ও আধুনিক ইতিহাস চিন্তা, কলকাতা, ১৯৮৩ বন্দ্যোপাধ্যায় শেখর, পলাশী থেকে পার্টিশন: আধুনিক ভারতের ইতিহাস, ওরিয়েন্ট লংম্যান, ২০০৪ ভট্টাচার্য সব্যসাচী, ঔপনিবেশিক ভারতের অর্থনীতি, কলকাতা, ২০০০ সুনীল সেন, ভারতে কৃষিকার্য ১৭৯৩-১৯৪৭, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৮৫ চৌধুরী বিনয় ভূষণ, ঔপনিবেশিক আমলে বাংলার কৃষি ইতিহাস, কে পি বাগচি এন্ড কোং, কলকাতা ইসলাম, সিরাজুল, বাংলার ইতিহাস ঔপনিবেশিক শাসনকাঠামো, চয়নিকা, ঢাকা, ২০০২ চক্রবর্তী মৃণাল, সিরাজ-উদ্-দৌলা, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ,কলকাতা, ১৯৮১ রায় রজতকান্ত, পলাশীর ষড়যন্ত্র ও সেকালের সমাজ, আনন্দ পাবলিশার্স, কলকাতা টৌধুরী সুশীল, পলাশীর অজানা কাহিনী, আনন্দ পাবলিসার্স,কলকাতা

<u>CC-13 : History of India (c. 1857 – 1964)</u>

I. Cultural changes and Social and Religious Reform Movements:

a) Growth of a new intelligentsia – the Press and Public Opinion

b) Reform and Revival : Brahmo Samaj, Prarthna Samaj, and Ramakrishna and Vivekananda,

Arya Samaj, Wahabi, Deoband, Aligarh and Singh Sabha Movements.

c)Debates around gender

d)Making of religious and linguistic identities

e)Caste : Sanskritising and anti Brahminical trends

II. Nationalism : Trends up to 1919

a)Formation of early political organizations
b) Moderates and extremists
c)Swadeshi movement
d)Revolutionaries

III. Gandhian nationalism after 1919 : Ideas and Movements:

a)Mahatma Gandhi : his Perspectives and Methods
b)i) Impact of the First World War
ii) Rowlatt Satyagraha and Jalianwala Bagh
iii)Non-Cooperative and Civil Disobedience
iv)Provincial Autonomy, Quit India and INA
c)Left wing movements
d)Princely India : States people movements

IV. Nationalism and Social Groups : Interfaces:

a) Landlords, Professionals and Middle Classes b)Peasants c)Tribals d)labours e)Dalits f)Women g)Business groups

V.Communalism : Ideologies and practices, RSS , Hindu Maha Sabha, Muslim League

VI. Independence and Partition

a)Negotiations for independence and partitionb)Popular movementsc)Partition riots

VII. Emergence of a New State:

a)Making of the Constitutionb)Integration of princely statesc) Land reform and beginnings of planningd) The Nehru years.

Essential Readings

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দত্ত রজনী পাম, আজিকার ভারত (India Today) সরকার সুশোভন, বাংলার রেনেসাঁস, (Notes on Bengal Renaissance), দীপায়ন, কলকাতা ত্রিপাঠী অমলেশ, ভারতের মুক্তিসংরামে চরমপন্থী পর্ব, (The Extremist Challenge) আনন্দ পাবলিশার্স, কলকাতা মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস(২য় খন্ড) (মুঘল ও ব্রিটিশ ভারত) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ৪র্থ মুদ্রণ, ১৯৯৮ সুর নিখিল, ভারতীয় জাতীয়তাবাদী আন্দোলনের পটভূমি, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৮৯ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৮৫৮-১৯২০) (১ম খন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৯৮ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৯২০-১৯৪৭) (২য় খন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৯৯ সেন সুনীল, ভারতে কৃষিসম্পর্ক (১৭৯৩-১৯৪৭) (Agrarian Relations in India (1793-1847) পশ্চিমবঙ্গ রাজ্য পৃস্তুক পর্ষদ, ১৯৮৫ ত্রিপাঠী অমলেশ, স্বাধীনতা সংগ্রামে ভারতের জাতীয় কংগ্রেস, আনন্দ পাবলিশার্স, কলকাতা চন্দ্র বিপান, আধুনিক ভারতঃ ঔপনিবেশিকতাবাদ ও জাতীয়তাবাদ (Nationalism and Colonialism), কে পি বাগচি এন্ড কোং, কলকাতা

CC-14 : History of World Politics: 1945-1994

- I. The Cold War: Weakening of European balance of power: Origins of The Cold War: Yalta and Potsdam Conferences; End of wartime alliance.
- II. The USA in World Politics: Truman Doctrine, Marshall Plan, NATO.
- III. The USSR in World Politics: Molotov Plan, COMECON and Cominform; Sovietisation of Eastern Europe; Berlin Blockade; Warsaw Pact.
- IV. Manifestation of Cold War: The Korean Crisis- End of French Colonial rule in Indo-China and the Vietnam War – Cuban Crisis.
- V. De-Stalinisation; Thaw in Cold War; Détente and road to the ending of Cold War.
- VI. Disintegration and Decline of the Soviet Union Glasnost and Perestroika Crisis of Socialist regimes in other East European Countries: Poland, Germany, Czechoslovakia, Hungary – Response of the USA; Rise of a Unipolar World system, Globalization.
- VII. Emergence of the People's Republic of China China and the USA Sino-Soviet rift.
- VIII. West Asian Crisis Palestine and Western Powers Birth of Israel Arab-Israel Conflict –The Suez Crisis (1956); Origin and Formation of PLO; Yom Kippur War(1973); Camp David Accord(1979); Oslo Peace Accord(1993).
- IX. Decolonization: The African Case Study: Ghana, Algeria, Congo, Kenya.
- X. Protest Politics: Civil Rights Movement, Anti-Apartheid Movement and the end of Apartheid (1994), Second Wave Feminist Movement.

Selected Readings

Asa Briggs and Patricia Clavin, Modern Europe 1789 – Present, Delhi, 2009.

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Edward Crankshaw, The New Cold War : Moscow vs. Peking, Penguin Books, 1963.

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John Merriman, A History of Modern Europe From Renaissance to the Present, London, 1996.

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Kathleen A. Laughlin and Jacqueline L. Castledine, Breaking the wave : women, their organizations, and feminism, 1945-1985 New York : Routledge, 2011.

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Gail Collins, When Everything Changed: the Amazing Journey of American Women from 1960 to the Present, New York : Little, Brown and Co., 2009.

P. Eric Louw, The Rise, Fall, and Legacy of Apartheid, Praeger, 2004

Ryan M. Irwin Gordian Knot: Apartheid and the Unmaking of the Liberal World Order, Oxford University Press, 2012

Mark Newman, The Civil Rights Movement, Edinburgh University Press, 2004

চক্রবর্তী রাধারমণ ও চক্রবর্তী সুকল্পা, সমসাময়িক আন্তর্জাতিক সম্পর্ক , প্রগ্রেসিভ পাবলিশার্স, কলিকাতা।

চট্টোপাধ্যায় প্রণবকুমার, আন্তর্জাতিক সম্পর্কের ইতিহাস, কলিকাতা ১৯৯৪।

Discipline Specific Elective: DSE TH&TU

Paper 1 DSE-A-1 SEM -5: History of Bengal (c.1757-1905)

- I. Political history of Bengal under the Nawabs: Rise of British power in Bengal from the battle of Plassey to Buxar.
- II. .Administrative history: 1765--1833
- III. Colonial economy: Agriculture, trade and industry.
- IV. Cultural changes and Social and Religious Reform Movements: Christian missionaries- The advent of printing and its implications, education: Indigenous and western - Hindu and Muslim religious revivalist movements.
- V. Social Reforms and the women's question.
- VI. Protest movements and insurgencies against the Raj: The Fakir and Sannyasi revolts, Indigo Revolt (1859-1860), Pabna Peasant Uprisings (1873-76)
- VII. Partition of Bengal 1905: Curzon and the administrative blueprint.

Select Readings:

Bandyopadhyay, Sekhar. From Plassey to Partition: A History of Modern India. New Delhi: Orient Blackswan , 2004

Banerjee Dube, Ishita. A History of Modern India. Cambridge University Press, 2015

Bayly C.A., Indian Society and the Making of the British Empire Cambridge University Press, 1995

Choudhary Sushil, Prelude to Empire: Plassey Revolution of 1757. Delhi: Manohar, 2000.

Ghosh, Suresh Chandra. The History of Education in Modern India, 1757 - 2012 Delhi: Orient Blackswan, Edition4, 2013

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Marshall P.J, Bengal the British Bridgehead Bengal: The British Bridgehead: Eastern India 1740-1828. Cambridge University Press. 1987 Metcalfe, Thomas, Ideologies of the Raj. Cambridge: Cambridge University Press, 1995.Sinha , N.K. ed. The history of Bengal 1757- 1905 Calcutta: Calcutta University Press, 1967

বন্দ্যোপাধ্যায় শেখর, পলাশি থেকে পার্টিশান, ওরিয়েন্ট লংম্যান চন্দ্র বিপান এবং অন্যান্য, ভারতের স্বাধীনতা সংগ্রাম, কে পি বাগচি এন্ড কোং, কলকাতা চন্দ্র বিপান এবং অন্যান্য, ভারতবর্ষ – স্বাধীনতার পরে, , আনন্দ পাবলিশার্স, কলকাতা চন্দ্র বিপান, আধুনিক ভারতঃ ঔপনিবেশিকতাবাদ ও জাতীয়তাবাদ, কে পি বাগচি এন্ড কোং, কলকাতা

চ্যাটার্জী জয়া, বাংলা ভাগ হোলঃ হিন্দু সাম্প্রদায়িকতা ও দেশ-বিভাগ, ১৯৩২-১৯৪৭। এল আলমা পাবলিকেশনস, কলকাতা, ২০০৩

দেশাই এ আর, ভারতীয় জাতীয়তাবাদের সামাজিক পটভূমি, কে পি বাগচি এন্ড কোং, কলকাতা

দত্ত রজনী পাম, আজিকার ভারত সরকার সুশোভন, বাংলার রেনেসাঁস, দীপায়ন, কলকাতা ত্রিপাঠী অমলেশ, স্বাধীনতা সংগ্রামে ভারতের জাতীয় কংগ্রেস ১৮৮৫–১৯৪৭। কলকাতা আনন্দ পাবলিশার্স, ২০১২। ত্রিপাঠী অমলেশ, ভারতের মুক্তিসংরামে চরমপন্থী পর্ব, আনন্দ পাবলিশার্স, কলকাতা

মুখোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস(২য় খন্ড) (মুঘল ও ব্রিটিশ ভারত) পশ্চিমবঙ্গ রাজ্য পন্তুক পর্ষদ, ৪র্থ মদ্রণ, ১৯৯৮

সুর নিখিল, ভারতীয় জাতীয়তাবাদী আন্দোলনের পটভূমি, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৮৯ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৮৫৮-১৯২০) (১ম খন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৯৮

চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৯২০–১৯৪৭) (২য় খন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৯৯

সেন সুনীল, ভারতে কৃষিসম্পর্ক(১৭৯৩-১৯৪৭) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৮৫ ত্রিপাঠী অমলেশ, স্বাধীনতা সংগ্রামে ভারতের জাতীয় কংগ্রেস, আনন্দ পাবলিশার্স, কলকাতা

Paper 2 DSE-A-3 SEM -6: History of Bengal (c.1905-1947)

- I. Partition of Bengal and Swadeshi Movement (1905-08) Political ideology and organizations, rise of Extremism in Bengal, Swadeshi movement, Revolutionary terrorism.
- II. Communal Politics: 1906- 30 Birth of Muslim League, and the Hindu response.
- III. Gandhian nationalism after 1919, Non- Cooperation and Khilafat movement, Swaraj party, Civil Disobedience movement, Revolutionary Nationalists and the beginnings of Left politics in the 1920s, Rise of Krishak Praja Party, Muslim League in Bengal politics.
- IV. Government of India Act 1935 and its aftermath:
- V. Peasant Movements in Bengal 1920-1946, Labour Movement in Bengal 1920-1946, Caste Movement in Bengal 1920-1946, Women's Movements in Bengal 1920-1946.
- VI. Subhash Chandra Bose and the Congress, Quit India Movement in Bengal, Post war upsurges in Bengal- Left wing movements.
- VIII. Independence and Partition: Communal Riots, the great Calcutta killing and Noakhali riots, Hindu Mahasabha, Muslim League, freedom and Partition, Birth of West Bengal and East Pakistan.

Select Readings:

Bhattacharya Sabyasachi, The Defining Moments in Bengal 1920–1947 New Delhi: Oxford University Press, 2014. Brown Judith, Gandhi's rise to Power, 1915-22. Cambridge University Press, 1974 Brown Judith, Gandhi: A Prisoner of Hope. Yale University Press, 1991 Chandra Bipan, Panikkar K.N., Mukherjee Mridula, Mahajan Sucheta and Mukherjee Aditya, India's, Struggles for Independence. Hiren Chakrabarty, Political Protest In Bengal : Boycott and Terrorism 1905-1918 Papyrus, Calcutta Das Suranjan, Communal Riots in Bengal 1905-47, Oxford University Press, OUP 1991.1993 Sarkar Sumit, Modern India, 1885-1947. Macmillan Publishers India Publication, 2000. Sarkar Sumit, The Swadeshi Movement in Bengal 1903-1908 New Delhi: People's Publishing House, 1973 Tripathi Amalesh, The Extremist Challenge: India between 1890 and 1910 Orient Longmans, 1967. বন্দ্যোপাধ্যায় শেখর, পলাশি থেকে পার্টিশান, ওরিয়েন্ট লংম্যান চন্দ্র বিপান এবং অন্যান্য, ভারতের স্বাধীনতা সংগ্রাম, কে পি বাগচি এন্ড কোং, কলকাতা চন্দ্র বিপান এবং অন্যান্য, ভারতবর্ষ – স্বাধীনতার পরে, , আনন্দ পাবলিশার্স, কলকাতা চন্দ্র বিপান, আধুনিক ভারতঃ ঔপনিবেশিকতাবাদ ও জাতীয়তাবাদ, কে পি বাগচি এন্ড কোং,

কলকাতা

চ্যাটার্জী জয়া, বাংলা ভাগ হোলঃ হিন্দু সাম্প্রদায়িকতা ও দেশ-বিভাগ, ১৯৩২-১৯৪৭। এল আলমা পাবলিকেশনস, কলকাতা, ২০০৩

দেশাই এ আর, ভারতীয় জাতীয়তাবাদের সামাজিক পটভূমি, কে পি বাগচি এন্ড কোং, কলকাত

দত্ত রজনী পাম, আজিকার ভারত সরকার সুশোভন, বাংলার রেনেসাঁস, দীপামন, কলকাতা ত্রিপাঠী অমলেশ, স্বাধীনতা সংগ্রামে ভারতের জাতীয় কংগ্রেস ১৮৮৫-১৯৪৭। কলকাতা আনন্দ পাবলিশার্স, ২০১২। ত্রিপাঠী অমলেশ, ভারতের মুক্তিসংরামে চরমপন্থী পর্ব, আনন্দ পাবলিশার্স, কলকাতা তউাচার্য সব্যসাচী, বাংলায় সন্ধিক্ষণং ইতিহাসের ধারা ১৯২০-৪৭। অক্সফোর্ড ইউনিভার্সিটি প্রেসং ২০১৮। মুথোগাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস(২য় থন্ড) (মুঘল ও ব্রিটিশ ভারত) পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ৪র্থ মুদ্রণ, ১৯৯৮ সুর নিথিল, ভারতীয় জাতীয়তাবাদী আন্দোলনের পটভূমি, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৮৯ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৮৫৮-১৯২০) (১ম থন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৯৮ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৯২০-১৯৪৭) (২য় থন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৯৮ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৯২০-১৯৪৭) (২য় থন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৯৯ সেন সুনীল, ভারতে কৃষিসম্পর্ক(১৭৯৩-১৯৪৭) পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৮৫ ত্রিপাঠী অমলেশ, স্বাধীনতা সংগ্রামে ভারতের জাতীয় কংগ্রেস, আনন্দ পাবলিশার্স, কলকাতা

Paper 3 DSE-B-2 SEM -5: History of Southeast Asia – The 19th Century

I. Pre-Colonial Structures of Power and Authority c.1800

II. Economy and Society in early 19th c.

a)Patterns of production in agriculture and the crafts

b) Organisation of trade and banking

c) Cultural expressions : Folk and Classical

d)Islam and popular culture

III. Colonisation and Colonial Transformations:

- a)Processes of colonial controls and the Informal Empire in Thailand
- b) Peasant society and agrarian transformations, plantations, forests, mining.
- c) Urbanisation : Colonial cities in Plural Societies
- d) Culture : i) Colonial Discourses and the Creation of National Culture
- ii)Oral traditions, literacy and the case of Malay Hikayats.
- iii) Creation of Perfect Natives
- iv) Education

Essential Readings

Anderson B., Imagined Communities: Reflections on the Origin and Spread of Nationalism Verso 1983

Benda H., The Crescent and the Rising Sun. The Hague, W. van Hoeve, 1958.

Furnivall, Colonisation and the Plural Society Oxford University. Press, 1980

Hart G., ed., Agrarian Transformations: Local Processes and the state in South-East Asia. Berkeley : University of California Press,1989

Kemp J., ed., Peasants and Cities, Cities and Peasants : Rethinking Southeast Asian Models. Osborne Milton, South East Asia : An Introductory History Allen & Unwin, 2016. Tarling Nicholas, ed., Cambridge History of South-East Asia, 2 vols. Cambridge University Press . 1993

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Suggested Readings

Anderson B., Mythology and the Tolerance of the Javanese Southeast Asia Program Cornell University monograph series, Modern Indonesia Project (1985)

Dijk Van C., Trousers, Sarongs and Jubbahs

Dobblin C., Islamic Revivalism in a Changed Peasant Economy (1784 – 1847) London: Curzon Press, 1983

Keys, Charles F., The Golden Peninsula Honolulu : University of Hawaii Press, 1995.

Lev Daniel S., and McVey T., eds, Making Indonesia – Essays on Modern Indonesia. Ithaca: Cornell Southeast Asia Program, 1996

Purcell Victor, The Chinese in South-East Asia London and New York: Oxford University Press, 1951 Winichakul Tongchai, Siam Mapped : A History of the Geo-Body of a Nation University of Hawaii Press, 1994

Wyatt, David K, Thailand: Studies in Thai History, 1999

Paper 4 DSE-B-4 SEM -6: History of Southeast Asia – The 20th Century I. Migration : Indian and Chinese Labour and Capital

II. Movements of Resistance and the making of new identities

a) Peasant resistance

b) Radicalism and the Origins of the Vietnamese Revolution, 1920-1946

c) Indonesian Revolution, 1945-1949

III. Emergence of Modern Nations and States

a) The Union of Burma (Mynamar), 1948-1962b) Indonesia, the Sukarno Era, 1949-1965c) Two Vietnams : 1946 - 1976

Essential Readings

Amin Mohammad and Malcolm Coldwell, ed, Malay: The Making of a Neo Colony, 1977 Anderson B., Imagined Communities Reflections on the Origin and Spread of Nationalism Verso 1983 Bandyopadhyay Sekhar, Burma Today, 1987 Benda H., The Crescent and the Rising Sun The Hague, W. van Hoeve, 1958.

Furnivall, Colonization and the Plural Society Oxford University. Press, 1980
Hart G., ed., Agrarian Transformations: Local Processes and the state in South-East Asia Berkeley : University of California Press, 1989
Kemp J., ed., Peasants and Cities, Cities and Peasants : Rethinking Southeast Asian Models.
Legge John D, Indonesia (1964)
Osborne Milton, South East Asia: An Introductory History Osborne Milton, Allen & Unwin, 2016.
Ryan N. J, A History of Malaysia and Singapore, 1976
Sardesai D.R, Vietnam : Trials and tribulations of a Nation (1988)
Tarling Nicholas, ed., Cambridge History of South-East Asia, 2 vols. Cambridge University

Tarling Nicholas, ed., Cambridge History of South-East Asia, 2 vols. Cambridge University Press . 1993

সেন জহর, দক্ষিণ পূর্ব এশিয়ার ইতিহাস, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, মুখোপাধ্যায় সুবোধ, দক্ষিণ পূর্ব এশিয়া ,

Suggested Readings

Anderson B., Mythology and the Tolerance of the Javanese Southeast Asia Program Cornell University monograph series, Modern Indonesia Project (1985)

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Dobblin C., Islamic Revivalism in a Changed Peasant Economy (1784 – 1847)) London: Curzon Press, 1983

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Winichakul Tongchai, Siam Mapped : A History of the Geo-Body of a Nation University of Hawaii Press, 1994

Wyatt, David K, Thailand: Studies in Thai History, 1999

Paper 5 DSE-B-1 SEM -5: History of Modern East Asia – I China (c.1840 – 1949)

I. Imperialism and China during the 19th and early 20th century

a) Chinese feudalism : Gentry, Bureaucracy and peasantry; the Confucian value system; Sinocentrism; the canton commercial system

b)The transformation of China into an informal colony; the Opium Wars; the Unequal Treaties; the scramble for concessions; Finance Imperialism; the Open Door policy.

c)Agrarian and Popular Movements : Taiping and Yi Ho Tuan

d)Attempts at Self-Strengthening (Tzu-Chiang): Reforms of 1860-95; 1898; and 1901-08. ii) The Emergence of Nationalism in China

a)The Revolution of 1911: Causes, nature and significance; the social composition of the Revolution; Sun Yat-sen and his contribution; the formation of the Republic; Yuan Shih Kai; War Lordism.

b)May Fourth Movement of 1919: Nature and Significance

II. History of China (cc.1919 – 1949)

i) Nationalism and Communism in China (1921 – 1937)
a) Formation of CCP; and the
b) The First United Front
i)The Communist Movement (1938-1949)
ii)The Jiangxi Period and the rise of Mao Tse Tung

Essential Readings

Beckamann George M., Modernization of China and Japan Harper & Row, 1962 Bianco Lucien, Origins of the Chinese Revolution, 1915 -1949 Stanford University Press, 1973 Chesneaux Jean, et al, China from Opium War to 1911 Revolution to Liberation. Hassocks, Sussex : The Harvester Press, cop.1976

Chesneaux Jean, Peasant Revolts in China, 1840 – 1949 W. W. Norton ,1973

Chung Tan, China and the Brave New World : A Study of the Origins of the Opium War, 1840 - 42

Chung Tan, Triton and Dragon : Studies on the Nineteenth Century China and Imperialisms Gian Publishing House, 1986

Fairbank J.K (ed), The Cambridge History of China, Vol. X Cambridge University Press, 1978 Fairbank John K., et al, and East Asia: Modern Transformation London : Allen & Unwin,1965 Franke Wolfgang, A Century of Chinese Revolution University of South Carolina Press, 1980 Hsu Y.Immanuel, The Rise of Modern China OUP 1995

Jansen M.B., Japan and China: From War to Peace, 1894 – 1972 Chicago : Rand McNally College Pub. Co., [1975

Johnson Chalmers A, Peasant Nationalism and Communist Power: The Emergence of Red China, 1937 -1945 Stanford, 1962

Michael Franz, The Taiping Rebellion Seattle and London: University of Washington Press, 1971

Peffer Nathaniel, The Far East: A Modern History. University of Michigan Press, 1958 Purcell Victor, The Boxer Uprising: A Background Study. Cambridge University Press, 2010 Schifrin Harold Z, Sun Yat-Sen and the Origin of the Chinese Revolution. University of California Press, 1968 Schuramann Franz and Schell Orville (eds.), China Readings, 2 Volumes, (Imperial China, and Republican China) Penguin; First edition 1967

Schwartz Benjamin I., Mao and the Rise of Chinese Communism. Stanford, Stanford University Press, 1951.

Sheng Hu, Imperialism and Chinese Politics. Foreign Languages Press, 1981

The Yi Ho Tuan Movement, The Revolution of 1911, Foreign Language Press, Beijing.

Tse Tung Chow, The May Fourth Movement: Intellectual Revolution in Modern China. Stanford University Press: Stanford, 1967

Wright Mary C., China in Revolution : The First Phase, 1900 – 1913. New Haven: Yale University Press, 1968

Yu-teng Ssu and K. Fairbank John , China's Response to the West. Cambridge: Harvard University Press, 1954

চৌধুরী দেবপ্রসাদ-আধুনিক যুগে পূর্ব এশিয়ার সংক্ষিপ্ত ইতিহাস, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ,, কলকাতা, ১৯৮৬

ভট্টাচার্য অমিত– চীনের রূপান্তরের ইতিহাস, ১৮৪০–১৯৮৯, কলকাতা, ২০০৪ চট্টোপাধ্যায় হরপ্রসাদ, চীনের ইতিহাস, কলকাতা, ১৯৮৮

সেন জহর, এ যুগের চীনকথা, কলকাতা, ২০০৭

Paper 6 DSE-B-3 SEM -6: History of Modern East Asia – II Japan (c.1868 – 1945)

I) Transition from feudalism to capitalism:

- a) Crisis of Tokugawa Bakuhan system
- b) Meiji Restoration : Its nature and Significance

c) Political Reorganization

d) Military Reforms
e) Social, cultural and educational reforms (Bunmeikaika)

f) Financial reforms and educational development in the 'Meiji' era

g) Meiji Constitution

II) Japanese Imperialism

- a) China
- b) Manchuria
- c) Korea

3) Democracy and Militarism / Fascism

- a) Popular/ People's Rights Movement
- b) Nature of political parties
- c) Rise of Militarism-Nature and significance
- d) Second World War; American occupation
- e) Post-War Changes

Essential Readings

Allen George, A Short Economic History of Modern Japan. Psychology Press, 2003 Beasley G., The Modern History of Japan. Weidenfeld & Nicolson, 1963 Beckman George M, Modernization of China and Japan. Joanna Cotler Books , 1962 Beckman George M, The Making of the Meiji Constitution . Praeger; New edition 1975 Fairbank John K., et al, East Asia: Modern Transformation. London : Allen & Unwin,1965 Jansen M B (ed), The Cambridge History of Japan Vols. I and II Livingstone Jon, et al., The Japan Reader (Imperial Japan : 1800 – 1945), Vol.I Pantheon, 1974 Mikiso Hane, Modern Japan: A Historical Survey. Westview Press, 4th edition 2008 Norman E.H, Japan's Emergence as a Modern State. Greenwood Press, 1973 Peffer Nathaniel, The Far East: A Modern History. University of Michigan Press, 1968 -Pyle Kenneth B., The Making of Modern Japan. D.C. Heath, 1996 Storry Richard, A History of Modern Japan Penguin Books, 1991 Vinacke H, A History of the Far East in Modern Times 1928

টোধুরী দেবপ্রসাদ–আধুনিক যুগে পূর্ব এশিয়ার সংক্ষিপ্ত ইতিহাস, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা, ১৯৮৬ ভট্টাচার্য অমিত– জাপানের রূপান্তরের ইতিহাস, ১৬০০–১৯৪৫, কলকাতা, ২০০৫ চট্টোপাধ্যায় হরপ্রসাদ, জাপানের ইতিহাস, কলকাতা, ১৯৮৬ গুহরায় সিদ্ধার্থ, – আধুনিক পূর্ব এশিয়ার ইতিহাস: চীন ও জাপানের ইতিহাস, কলকাতা, ১৯৯৬

Paper 7 DSE-A-2 SEM -5: History of United States of America – I (c.1776 – 1945)

I. The Background:

The land and indigenous people: settlement and colonization by Europeans; early colonial society and politics; indentured labour- White and Black.

II. Making of the Republic:

a)Revolution : Sources of conflict : Revolutionary groups, Ideology: The War of Independence and its historical interpretations

b) Processes and Features of Construction making : Debates, Historical interpretations.

III. Evolution of American Democracy:

a)Federalists: Jeffersonianism: Jacksonianism, Rise of political parties- 1840 – 1960; judiciary-role of the Supreme Court

b) Expansion of Frontier: Turner's Thesis; Marginalization, displacement and decimation of native Americans; Case histories of Tecumseh , Shawnee Prophet.c)Limits of Democracy: Blacks and Women

IV. Early Capitalism

a) Beginnings of Industrializationb) Immigrants and changing composition of Labour; Early Labour Movements.

V. The Agrarian South :

a)Plantation economyb)Slave Society and Culture: Slave resistance.

VI. Ante Bellum Foreign Policy:

War of 1812: Monroe Doctrine: Manifest Destiny

VII. Civil War:

a)Abolitionism and Sectionalismb)Issues and interpretationsc)Rise of Republicanism, Emancipation and Lincoln

Essential Readings

Bailyn Bernard, The Great Republic 1985.

Bailyn Bernard, The Ideological Origins of the American Revolution. Harvard University Press 1967

Beard Charles, An Economic Interpretation of the American Constitution. Macmillan, 1921 Brown Dee, Bury My Heart at Wounded Knee, An Indian History of the American West. Grover Gardner 1970

Carroll Peter and Noble David, Free and Unfree: A New History of the United States. Penguin Books, 1977.

Davis David B., The Problem of Slavery in the Age of Revolution *1770-1823*. New York: Oxford University Press, 1999.

Faulkner U., American Economic History . New York, Harper, 1960

Fogel Robert, Railroads and American Economic Growth Baltimore: Johns Hopkins Press, 1964. Foner Eric, America's Black Past. Harper collins, 1970

Franklin, John Hope, From Slavery to Freedom. New York: Alfred A Knopf, 1947 Grobb Gerald N., and Billias George A., Interpretations of American History: Patterns and Perspectives, 2 Vols. New York, Free Press 1972.

Hofstadter Richard, The Age of Reform, From Bryan to FDR. Vintage Books, 1955

Kerber Linda, Women's America: Refocussing the Past. Oxford University Press, 1991

Potter David M., The Impending Crisis HarperCollins, 1977

Pratt W., A History of the United States Foreign Policy. Prentice-Hall, 1965

Randail James, The Civil War and Reconstruction. W. W. Norton & Company ,1937

Randall J.G and Donald David, The Civil War and Reconstruction. Pickle Partners Publishing, 2016

Stampp Kenneth, The Peculiar Institution, Slavery in the Antebellum South. (New York: Alfred A. Knopf, 1956

Jackson Frederick Turner, The Frontier in American History. Henry Holt, 1921 Wiebe Robert, The Search for Order. Farrar, Straus and Giroux, 1967

Suggested Readings

Benson Lee, The Concept of Jackson Democracy: New York as a Test Case Princeton Legacy Library 1961

Billington Ray A., Westward Expansion. UNM Press, 2001

Boyer Paul, Sitkoff Harvard, Woloch Nancy, The Enduring Vision : A History of the American People, Vols. 1 and 2. Houghton Mifflin; 5th Revised edition 2003

Cochran Thomas, The Inner Revolution Harper Torchbooks, The Academy Library), 1964.

Craven A.O., The Growth of Southern Nationalism, 1848 – 1861. Louisiana State University Press, 1953

Davis lance E.,(ed.), American Economic Growth. Harper & Row; First edition 1972 Degler Carl N., At Odds: Women and Family in America from the Revolution to the Present. Oxford University Press, 1980

Fogel and Engerman, Time on the Cross. Brown and Company, 1974.

Gould Lewis L., (ed.), The Progressive Era. Longman, 2001

Hicks, John D., The Federal Union : A History of USA since 1865. Houghton Mifflin, 1964

Kaushik R.P., Significant Themes in American History. Ajanta Publications, 1983

Kennedy, David M., Bailey Thomas and Piehl Mel, The Brief American Pageant. Cengage Learning, 1999.

Kristol Irving, Wood Gordon and others, America's Continuing Revolution.

Washington : American Enterprise Institute for Public Policy Research, 1975]

Leopard Richard W., The Growth of American Foreign Policy. Alfred A. Knopf 1967

Miller Perry, From Colony to Province. Harvard University Press, 1953

Nash Gary (ed.), Retracing the Past. Longman, 2000

Pelling Henry, American Labor. University of Chicago 1960

Pessen Edward, Jacksonian Panorama. Bobbs-Merrill, 1976

Sellers Charles, May Henry and McMillen Neil, A Synopsis of American History; 2 volumes. Rand McNally College Pub. Co., 1976

Tripathi Dwijendra and Tiwari S.C., Themes and Perspectives in American History American Studies Research Centre, 1978.

Weinstein James, The Corporate Ideal in the Liberal state. 1900-1918 Beacon Press, 1985

Paper 8 DSE-A-4 SEM -6: History of United States of America – II (c.1776-1945)

I. Reconstructions: Political changes and agrarian transformation:

a) Conservative and Radical phases.

b) The New South : Participants and Reactions, Carpetbaggers; Scalawags, Blacks, Ku Klux Klan.

II. Industrial America:

a)Growth of Capitalism and Big Business.

b) Business cycles; Depression..

III. Resistance and Reform:

a)Labour movements and Unionization.

b) Agrarian crisis and populism. Urban corruption and progressivism.

c) New Deal.

IV. U.S Imperialism

- a) Spanish-American War
- b) Expansion in the Far east and Latin America
- c) World War I and Fourteen Points
- d) Isolation
- e) Americans in World War II: Bombing of Hiroshima and Nagasaki

V. Afro-American Movements:

Black Movements: Booker T. Washington, W.E.B Dubois, NAACP and Marcus Garvey.

VI. Women's Movements:

- a) Rise of the Lowell Factory System
- b) Abolitionists and Women's rights movement

c) Suffrage

d) Afro-American Women

VII. Religious, Cultural and Intellectual Trends:

a)Religious movements; Early Revivalism; Puritans, Quakers; Mormons; Temperance b) Mass Culture (circa 1900 – 1945)

c) Major Literary trends (circa 1900 – 1945)

Essential Readings

Bailyn Bernard, The Great Republic 1985.

Bailyn Bernard, The Ideological Origins of the American Revolution. Harvard University Press 1967

Beard Charles, An Economic Interpretation of the American Constitution. Macmillan, 1921 Brown Dee, Bury My Heart at Wounded Knee, An Indian History of the American West. Grover Gardner 1970

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Faulkner U., American Economic History . New York, Harper, 1960

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Craven A.O., The Growth of Southern Nationalism, 1848 – 1861. Louisiana State University Press, 1953

Davis lance E.,(ed.), American Economic Growth. Harper & Row; First edition 1972

Degler Carl N., At Odds: Women and Family in America from the Revolution to the Present. Oxford University Press, 1980

Fogel and Engerman, Time on the Cross. Brown and Company, 1974.

Gould Lewis L., (ed.), The Progressive Era. Longman, 2001

Hicks, John D., The Federal Union : A History of USA since 1865. Houghton Mifflin, 1964

Kaushik R.P., Significant Themes in American History. Ajanta Publications, 1983

Kennedy, David M., Bailey Thomas and Piehl Mel, The Brief American Pageant. Cengage Learning, 1999.

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Washington : American Enterprise Institute for Public Policy Research, 1975]

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Pessen Edward, Jacksonian Panorama. Bobbs-Merrill, 1976

Sellers Charles, May Henry and McMillen Neil, A Synopsis of American History; 2 volumes. Rand McNally College Pub. Co., 1976

Tripathi Dwijendra and Tiwari S.C., Themes and Perspectives in American History American Studies Research Centre, 1978.

Weinstein James, The Corporate Ideal in the Liberal state. 1900-1918 Beacon Press, 1985

Skill Enhancement Courses (SEC –A & B) Credits,-2 each

SEC –A (1): Archives and museums

This course introduces students to the institutions that house and maintain documentary, visual and material remains of the past. Museums and archives are among the most important such repositories and this course explains their significance and how they work. Students will be encouraged to undertake collection, documentation and exhibition of such materials in their localities and colleges. Visit to National Archives and National Museum are an integral part of the course.

I. Definition and history of development (with special reference to India)

II. **Types of archives and museums**: Understanding the traditions of preservation in India Collection policies, ethics and procedures Collection: field exploration, excavation,

purchase, gift and bequests, loans and deposits, exchanges, treasure trove confiscation and others. Documentation: accessioning, indexing, cataloguing, digital documentation and de-accessioning Preservation: curatorial care, preventive conservation, chemical preservation and restoration

III. Museum Presentation and Exhibition:

IV. IV. Museums, Archives and Society: (Education and communication Outreach activities

Essential Readings:

Agrawal, O.P., Essentials of Conservation and Museology, Sundeep Prakashan, New *Delhi*, India, 2007.

Choudhary, R.D. Museums of India and their maladies. Calcutta: Agam Kala Prakashan, New Delhi, 1998(In Bengali).

Guha, Thakurta, Tapati, Monuments, Objects, Histories: Institution of Art in Colonial Post Colonial India, New York, 2004

Kathpalia, Y. P. Conservation and Restoration of Archive Materials. UNESCO, 1973 Mathur Saloni, India by Design: Colonial History and Cultural Display, University of California, 2007

Nair, S.M. Bio-Deterioration of Museum Materials.2011

Roychowdhury, Madhuparna. Displaying India's Heritage : Archaelogy and the Museum Movement in Colonial India. Delhi: Orient Blackswan 2015

Sengupta, S. Experiencing History Through Archives. Delhi: Munshiram Manoharlal.2004.

SEC –**B** (1) Understanding Popular Culture

The paper examines some popular cultures expressed in different mediums like visual, oral and cultural. In the process of their evolution, these cultures eclectically draw from traditions, articulate anxieties, and even give rise to new traditions. The paper endeavours to equip students with understanding such phenomena historically, with special reference to India. It is imperative that the students use electronic devices to view, record, and document the subject matter.

I Introduction: Defining popular culture and understanding it historically

II Visual expressions Folk art, calendar art, photography

III. Performance: Theatre; music; folk tales/songs/swang and Nautanki:Identifying themes,functionality, anxieties

IV. The audio-visual: cinema and television:

Indian cinema: Mapping the influence of the national struggle for independence (1930s and 40s); Idealized nationalism (1950s), disillusionment and the anti-establishment mood (1970s and 80s); documentary films Expressions of popular culture in television

V. Fairs, Festivals and Rituals:

Disentangling mythological stories, patronage, regional variations

VI. Popular culture in a globalized world:

The impact of the Internet and audio-visual media

Essential Readings:

Dissanayake, W. and K. M. Gokul Singh, Indian Popular Cinema, Trentham Book, London, 2004

John Storey, Cultural Theory and Popular Culture, London, 2001

Oberoi, Patricia, Freedom and Destiny: Gender, Family and Popular Culture in India, Delhi, 2009

Christopher Princy, Camera Indica: The Social Life of Indian Photographs, Chicago, 1998

Suggested Readings:

Ramanujan, A.K. Folktales from India A Selection of Oral Tales from Twenty-two Languages (Only Introduction). New York : Pantheon Books, ©1991.

Ramaswamy, V. 'Women and the 'Domestic' in Tamil Folk Songs' in Kumkum Sangari and Uma Chakravarti, eds., From Myths to Markets: Essays on Gender, Shimla, 1999 Singh, Lata (ed.), Theatre in Colonial India: Playhouse of Power, New Delhi, 2009

SEC –A (2) Understanding Heritage

This course will enable students to understand the different facets of heritage and their significance. It highlights the legal and institutional frameworks for heritage protection in India as also the challenges facing it. The implications of the rapidly changing interface between heritage and history will also be examined. The course will be strongly project-based and will require visits to sites and monuments. At least two Projects will be based on visits to Museums/Heritage Sites.

I. Defining Heritage

Meaning of 'antiquity', 'archaeological site', 'tangible heritage', 'Intangible heritage' and 'art treasure'

II. Evolution of Heritage Legislation and the Institutional Framework:

Conventions and Acts— national and international Heritage-related government departments, museums, regulatory bodies etc. Conservation Initiatives

III. Challenges facing Tangible and Intangible Heritage

Development, antiquity smuggling, conflict (to be examined through Specific case studies)

IV. Evolution of Heritage Legislation and the Institutional Framework:

Conventions and Acts— national and international Heritage-related government departments, museums, regulatory bodies etc.

Conservation Initiatives

V. Challenges facing Tangible and Intangible Heritage:

Development, antiquity smuggling, conflict (to be examined through specific case studies)

VI. Heritage and Travel:

Viewing Heritage Sites - The relationship between cultural heritage, Landscape and travel recent trends

Essential Readings

David Lowenthal, Possessed By The Past: The Heritage Crusade and The Spoils of History, Cambridge, 2010

Layton, R. P. Stone and J. Thomas. Destruction and Conservation of Cultural Property, London: Rutledge, 2001

Lahiri, N., Marshaling the Past - Ancient India and its Modern Histories. Ranikhet: Permanent Black. 2012. Chapters 4 and 5.

S.S. Biswas, Protecting the Cultural Heritage (National Legislations and International Conventions). New Delhi: INTACH, 1999.

Suggested Readings

Acts, Charters and Conventions are available on the UNESCO and ASI websites (www.unesco.org; www.asi.nic.in)

Agrawal, O.P., Essentials of Conservation and Museology, Delhi, 2006

Chainani, S. 2007. Heritage and Environment. Mumbai: Urban Design Research Institute, 2007

SEC –B (2): Art Appreciation: an Introduction to Indian Art

The purpose of this course is to introduce students to Indian art, from ancient to contemporary times, in order to understand and appreciate its diversity and its aesthetic richness. The course will equip students with the abilities to understand art as a medium of cultural expression. It will give students direct exposure to Indian art through visuals, and visits to sites and museums.

I. Prehistoric and protohistoric art: _Rock art; Harappan arts and crafts

II. Indian art (c. 600 BCE – 600 CE):

World Heritage Site Managers, UNESCO World Heritage Manuals [Can be downloaded/ accessed at www.unesco.org]

Notions of art and craft Canons of Indian paintings Major developments in stupa, cave, and temple art and architecture Early Indian sculpture: style and iconography Numismatic art

III. Indian Art (c. 600 CE – 1200 CE) : Temple forms and their architectural features Early illustrated manuscripts and mural painting traditions Early medieval sculpture: style and iconography Indian bronzes or metal icons

IV. Indian art and architecture (c. 1200 CE – 1800 CE) :

Sultanate and Mughal architecture Miniature painting traditions: Mughal, Rajasthani, Pahari Introduction to fort, palace and haveli architecture

V. Modern and Contemporary Indian art and Architecture:

The Colonial Period Art movements: Bengal School of Art, Progressive Artists Group, etc. Major artists and their artworks Popular art forms (folk art traditions)

Essential Readings

Neumayer, Erwin, Lines of Stone: The pre-historic rock-art of India, South Asia Books, 1993 Goswamy, B.N., Essence of Indian Art, Asian Art Museum of San Francisco, 1986 Huntington, Susan, The Art of Ancient India: Hindu, Buddhist, Jain, Weatherhill, 1985 Guha-Thakurta, Tapati, The making of a new modern Indian art: Aesthetics and nationalism in Bengal, 1850-1920, Cambridge University Press, 1992

Suggested Readings:

Mitter, Partha, Indian Art, Oxford History of Art series, Oxford University Press, 2001 Dhar, Parul Pandya, ed., 2011, Indian Art History Changing Perspectives, New Delhi: D.K. Printworld and National Museum Institute (Introduction).

Beach, M.C., The New Cambridge History of India I: 3, Mughal and Rajput Painting, Cambridge University Press, 1992.

Ray, Niharranjan, An Approach to Indian Art, Calcutta, 1970

CBCS SYLLABUS IN HISTORY (GENERAL)

CALCUTTA UNIVERSITY 2018

University of Calcutta

HIS-G (General)-CBCS Syllabus in History, 2018

4 Core Courses. (CC.) 2 Discipline-specific Elective; (DSE-A & DSE-B) 2 Generic Elective (GE) 2 Skill Enhancement/Skill based Courses (SEC- A & SEC-B)

- Each course carries 80 marks. Minimum 60 classes.
- Each course: 6 credits (5 Theoretical + 1 Tutorial-related). Teaching time: 6 hrs per week or 6x14 = 84 hrs
- Exception: Skill Enhancement/Skill-based Courses: 2 credits (no Tutorial).
- ➢ 65 marks for theoretical segment:
- Question Pattern for subjective/descriptive segment of 50 marks: 3 questions out of 6(within 500 words; 10 x3 = 30) + 4 questions out of 8 (within 250 words; one from each module 5x4=20) and 15 objective type questions carrying 1 mark each (15 x 1 = 15).
- 15 marks for tutorial-related segments as suggested below (any one from each mode):
- Any one of the following modes: upto 1000 words for one Term Paper/upto 500 words for each of the two Term Papers/ equivalent Book Review --- based on syllabus related and/or current topics [The modes and themes and/or topics are be decided by the concerned faculty of respective colleges.]
- Core Courses (CC) in Semesters 1- 4 ; Generic Elective (GE) courses in Semesters 1-4; Skill Enhancement courses (SEC-A) in Semesters 3/5 & (SEC-B) in Semesters 4/6 Discipline-specific Elective(DSE –A) in Semester 5 (DSE –B) in Semester 6
- Skill Enhancement/Skill-based Courses: 2 credits (no Tutorial).
- Each course carries 80 marks. Teaching time: 2hrs per week or 2x14=28hrs
- > 80 marks for theoretical segment.
- Question Pattern for subjective/descriptive segment of 80 marks: 4 questions out of 8 (within 500 words; (10 x4 = 40) + 5 questions out of 10 (within 250 words; 5x5=25) and 15 objective type questions carrying 1 mark each (15 x 1 = 15).

IMPORTANT NOTES:

- The Readings provided below (except Bengali books) include those of the UGC Model CBCS Syllabus in History. For Course Objectives and references it is advised that the UGC model CBCS syllabus concerning relevant courses and topics should be given due importance and primarily consulted.
- Bengali are not necessarily substitutes, but supplementary to the English books.
- The format is subject to the CBCS Common Structural Format of the University.

LIST OF COURSES FOR GENERAL PROGRAMME				
COURSE CODE	(6 Credits per Core Course)			
		CORE COURSES FOR GENERAL		
		&		
Subject-Hon-Core-Semester-Pap	per-Th &TU	GENERIC ELECTIVE FOR HONOURS		
HIS-G-CC/GE-1-1-TH&T	U			
HIS-G-CC/GE-2-2-TH&T	U			
HIS-G-CC/GE-3-3-TH&T	U			
HIS-G-CC/GE-4-4-TH&T	U			
Skill Enhance	ement Cou	arse (2 Credits per Course)		
GROUP-A	H	HS-G-SEC- 3/5-A(1) or A (2)-TH		
SEC-A-(1)				
SEC-A-(2)				
GROUP-B	HIS-G-SEC- 4/6-B(1) or B(2)-TH			
SEC-B-(1)				
SEC-B-(2)				
DISCIP	LINE SP	ECIFIC ELECTIVE		
	(6 Credits	s per Course)		
GROUP-A	H	HS-G-DSE- 5-A(1) or A(2)-TH&TU		
DSE-A-(1)				
DSE-A-(2)				
GROUP-B	Н	IS-G-DSE-6-B(1) or B (2)-TH&TU		
DSE-B-(1)				
DSE-B-(2)				

Structure of B.A General (Programme)

HIS-G - CC -1- 4 /GE -1-4 TH&TU

1History of India from the Earliest Times upto 300 CE

2. History of India from C.300 to 1206.

3. History of India from C. 1206to1707

4. History of India from 1707to1950

Discipline Specific Elective (DSE -A &DSE- B) TH&TU Any One from DSE-A in Semester 5 & Any One from DSE-B in Semester 6

1. National liberation Movements in 20th Century World.

2. Some Aspects of European History: C.1780-1945.

3. Patterns of Capitalism in Europe: C.16TH Century to early 20th Century

4. Some Aspects of Society & Economy of Modern Europe: 15 – 18 Century

Skill Enhancement Courses SEC –A & B: Any One from SEC-A1/ SEC-A2 in Semester 3/5. Any One from SEC-B1/ SEC-B2 in Semester 4/6

SEC -A 1: Historical Tourism: Theory &Practice SEC -B 1: Museums &Archives in India SEC -A 2: Indian History &Culture

SEC-B 2: Orality and Oral Culture in India

	SEM-1	SEM-2	SEM-3	SEM-4	SEM-5	SEM-6
CC	CC-1	CC -2	CC-3	CC-4		
	2TH + 2TU	2TH + 2TU	2TH + 2TU	2TH + 2TU		
GE	GE-1	GE-2				
	TH +TU	TH +TU				
AECC	AECC-1	AECC-2				
	TH	TH				
DSE			DSE-A	DSE-B	DSE-A	DSE-B
			TH +TU	TH +TU	TH +TU	TH +TU
SEC			SEC-A-1	SEC-B-1	SEC-A 2	SEC-B 2
			TH	TH	TH	TH

Semester wise Courses for HIS-G

CC: 4 courses each from 2 disciplines. (One course from each subject under each semester) Each course is of 6 credits.

GE: Two courses from one subject different from the core subject. Each course is of 6 credits.

AECC:-1 Communicative English AECC-2- Environmental studies (Each course has 2 credits) DSE: 2 courses each from 2 disciplines. Each course is of 6 credits. SEC: 2 courses each from 2 disciplines ((Each course has 2 credits) DSE/ SEC : Choice must be group specific to each semester

<u>CC -1/GE-1</u> : History of India from Earliest Times up to 300 CE

I. Sources & Interpretation

II. A broad survey of Palaeolithic, Mesolithic and Neolithic Cultures.

III. Harappan Civilization : Origin, Extent, dominant features &decline, Chalcolithic age.

IV. The Vedic Period: Polity, Society, Economy and Religion, Iron Age with reference to PGW &Megaliths.

V. Territorial States and the rise of Magadha,

Conditions for the rise of Mahajanpadas and the Causes of Magadha's success VI. Iranian and Macedonian Invasions, Alexander's Invasion and impact VII. Jainism and Buddhism: Causes, Doctrines, Spread, Decline and Contributions VIII. The Satavahanas Phase: Aspects of Political History, Material Culture, Administration, Religion

VIII. Emergence and Growth of Mauryan Empire; State Administration, Economy, Ashoka's Dhamma, Art & Architecture

IX. The Satvahana Phase: Aspects of Political History, Administration, Material Culture, & Religion

X. The Sangam Age: Sangam Literature, The three Early Kingdoms, Society & the Tamil language

XI. The age of the Indo-Greeks, Shakas: Parthians & Kushanas: Aspects of Polity, Society, Religion, Arts & Crafts, Coins, Commerce and Towns.

References:

Agrawal, D.P. The Archaeology of India. Curzon Press, 1982

Basham, A.L. The Wonder that was India: A Survey of the Culture of the Indian Sub-Continent before the Coming of the Muslims. Picador, 2004

Chakrabarti, D.K. Archaeology of Ancient Indian Cities OUP India; 1998

Jaiswal, Suvira, Caste: Origin, Function and Dimensions of Change. Manohar Publishers 1998

Subramanian, N. Sangam Polity

Thapar, Romila The Penguin History of Early India: From the Origins to AD 1300 University of California Press; 1st edition 2004

Allchin, F.R. and B Origins of a Civilization: The Prehistory and Early Archaeology of South Asia New Delhi : Viking, 1997.

Jha, D.N. Ancient India in Historical Outline .Manohar, New Delhi (1998 edn.) Kosambi, D.D. Culture and Civilization of Ancient India World Publishing Company, 1969

Ray, H.P. Monastery and guild : commerce under the Sātavāhanas Delhi ; New York : Oxford University Press, 1986.

Sastri, K.A.N. A History of South India :From Prehistoric Times to the Fall of Vijayanagar OUP India 1976

R.S Sharma, India's Ancient Past Delhi: Oxford University Press 2005

Ray, Niharranjan , Maurya and Post Maurya Art: A Study in Social and Formal Contrasts . Indian Council of Historical Research, 1975

Sharma, R.S., Aspects of Political Ideas and Institutions in Ancient India (1991 edn.) Thapar, Romila Ashoka and the Decline of the Mauryas Oxford University Press (1997 edn) Yazdani, G. Early History of Deccan Aspects of Political Ideas and Institutions in Ancient India (1991 edn.)

বাশাম এ এল, অতীতের উজ্জ্বল ভারত, (The Wonder That Was India), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৫

চক্রবর্তী রণবীর, ভারত ইতিহাসের আদি পর্ব, কলকাতা, ২০০৭

হাবিব ইরফান, ভারতবর্ষের সাধারণ মানুষের ইতিহাস

প্রথম থন্ড – প্রাক-ইতিহাস, (Pre-history) এন বি এ, কলকাতা, ২০০২

দ্বিতীয় খন্ড: সিন্ধু সভ্যতা, (The Indus Civilisation) এন বি এ, কলকাতা, ২০০২

তৃতীয় খন্ড – বৈদিক সভ্যতা, (The Vedic Age) এন বি এ, কলকাতা, ২০০২

র্মা ডি এন, আদি ভারত – একটি সংক্ষিপ্ত ইতিহাস, (Ancient India: An Introduction,) প্রগ্রেসিভ পাবলিশার্স, কলকাতা

কোশাশ্বী ডি ডি, ভারত ইতিহাস চর্চার ভূমিকা (An Introduction to the Study of Indian History) বাগচি কে পি এন্ড কোং, কলকাতা, ২০০২

রত্নাগর শিরিণ, হরপ্পা সন্ড্যতার সন্ধানে (Understanding Harappa) এন বি এ, কলকাতা, ২০০৩

রায়চৌধুরী হেমচন্দ্র, প্রাচীন ভারতের রাজনৈতিক ইতিহাস, (Political History of Ancient India), পশ্চিমবঙ্গ রাজ্য পৃস্তক পর্ষদ, কলকাতা

থাপার রোমিলা, ভারতবর্ষের ইতিহাস, ওরিয়েন্ট লংম্যান, কলকাতা

ভট্টাচার্য নরেন্দ্রনাথ, প্রাচীন ভারতে ধর্ম, কলকাতা, ১৯৮৮

ভট্টাচার্য নরেন্দ্রনাথ, প্রাচীন ভারতীয় সমাজ, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, কলকাতা ভট্টাচার্য সুকুমারী, ইতিহাসের আলোকে বৈদিক সাহিত্য, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, কলকাতা ভট্টাচার্য সুকুমারী, প্রাচীন ভারত- সমাজ ও সাহিত্য, আনন্দ পাবলিশার্স, কলকাতা চক্রবর্তী দিলীপ কুমার - ভারতবর্ষের প্রাক্ ইতিহাস আনন্দ পাবলিশার্স, কলকাতা, ১৯৯৯ গঙ্গোপাধ্যায় দিলীপ কুমার - ভারত ইতিহাসের সন্ধ্বালে, (২ থন্ডে), ২০০৭ চক্রবর্তী বণরীর প্রাচীন ভারতের অর্থনৈতিক ইতিহাসের সন্ধালে, তালবন্দ পাবলিশার্স, কলকাতা ১

চক্রবর্তী রণবীর, প্রাচীন ভারতের অর্থনৈতিক ইতিহাসের সন্ধানে, আনন্দ পাবলিশার্স, কলকাতা ২০০২ (সংশোধিত সংস্করণ)

ঢানানা দেবরাজ, প্রাচীন ভারতে দাস প্রথা, (Slavery in Ancient India as depicted in Pali and Sanskrit Texts), কে পি বাগচি এন্ড কোং, কলকাতা ১৯৯৫

রায় নীহাররঞ্জন, বাঙালির ইতিহাস, কলকাতা, ১৯৮০(দ্বিতীয় সংস্করণ)

শর্মা রামশরণ, প্রাচীন ভারতে বস্তুগত সংস্কৃতি ও সমাজ সংগঠন, (Material Cultures and Social Formations in Ancient India), ওরিয়েন্ট লংম্যান, ১৯৯৮

শর্মা রামশরণ, আদি মধ্যযুগের ভারতীয় সমাজ : সমস্তু-প্রক্রিয়া বিষয়ে এক সমীক্ষা(Early Medieval Indian Society : A Study in Feudalism) ওরিয়েন্ট লংম্যান, ২০০৩

শর্মা রামশরণ, ভারতের সমাজতন্ত্র, (Indian Feudalism), কে পি বাগচি এন্ড কোং, কলকাতা

শর্মা রামশরণ, আর্যদের অনুসন্ধান, (Looking for the Aryans), প্রগ্রেসিভ পাবলিশার্স, কলকাতা

শর্মা রামশরণ, আর্যদের ভারতে আগমন, (Advent of the Aryans), ওরিযেন্ট লংম্যান, ২০০১

শর্মা রামশরণ, প্রাচীন ভারতে শূদ্র, (Sudras in Ancient India), কে পি বাগচি এন্ড কোং, কলকাতা থাপার রোমিলা, অশোক ও মৌর্যদের পতন, (Asoka and the Decline of the Mauryas), কে পি বাগচি এন্ড কোং, কলকাতা

চট্টোপাধ্যায় সুনীল, প্রাচীন ভারতের ইতিহাস (১ম খন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, একাদশ মুদ্রণ, এপ্রিল ২০০৪

চট্টোপাধ্যায় সুনীল, প্রাচীন ভারতের ইতিহাস (২য় খন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ৮ম মুদ্রণ, ফেব্রুয়ারি ২০০৪

মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস (১ম থন্ড) (প্রাচীন ও মধ্যযুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, প্রথম মুদ্রণ নভেম্বর ১৯৯৭

CC-2/GE- 2: History of India from. C.300 to1206

I. The Rise & Growth of the Guptas: Administration, Society, Economy, Religion, Art, Literature, and Science &Technology.

II. Harsha & His Times: Harsha's Kingdom, Administration, Buddhism & Nalanda

III. South India: Polity, Society, Economy & Culture

IV. Towards the Early Medieval: Changes in Society, Polity Economy and Culture with reference to the Pallavas, Chalukayas and Vardhanas.

V. Evolution of Political structures of Rashtakutas, Pala & Pratiharas.

VI. Emergence of Rajput States in Northern India: Polity, Economy & Society.

VII. Arabs in Sindh: Polity, Religion & Society.

VIII. Struggle for power in Northern India &establishment of Sultanate.

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সুনীল চট্টোপাধ্যায়, প্রাচীন ভারতের ইতিহাস (১ম থন্ড), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, একাদশ মুদ্রণ, এপ্রিল ২০০৪

হীরেন্দ্রনাথ মুথোপাধ্যায়, ভারতবর্ষের ইতিহাস (১ম থন্ড) (প্রাচীন ও মধ্যযুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, প্রথম মুদ্রণ নভেম্বর ১৯৯৭

বাশাম এ এল, অতীতের উজ্জ্বল ভারত, (The Wonder That Was India), প্রগ্রেসিড পাবলিশার্স, কলকাতা,

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মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস (১ম থন্ড) (প্রাচীন ও মধ্যযুগ), পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, প্রথম মুদ্রণ নভেম্বর ১৯৯৭

ভট্টাচার্য, নরেন্দ্রনাথ, ধর্ম ও সংস্কৃতিক: প্রাচীন ভারতীয় প্রেক্ষাপট

চক্রবর্তী রণবীর, প্রাচীন ভারতের অর্থনৈতিক ইতিহাসের সন্ধানে, আনন্দ পাবলিশার্স, কলকাতা ২০০২

চক্রবর্তী রণবীর, ভারত ইতিহাসের আদি পর্ব, ওরিয়েন্ট লংম্যান,কলকাতা, ২০০৭

সেন সমরেন্দ্রনাথ, বিজ্ঞানের ইতিহাস, শৈব্যা প্রকাশন, ১৯৯৬

শর্মা রামশরণ, ভারতের সামন্ততন্ত্র, (Indian Feudalism), কে পি বাগচি এন্ড কোং, কলকাতা

শর্মা রামশরণ, আদি মধ্যযুগের ভারতীয় সমাজ: সামন্ত-প্রক্রিয়া বিষয়ে এক সমীক্ষা(Early Medieval Indian Society: A Study in Feudalisation), ওরিয়েন্ট লংম্যান, ২০০৩

CC-3/GE-3 : History of India from 1206 to1707

I. Foundation, Expansion & consolidation of the Delhi Sultanate; Nobility & Iqta system.

II.Miltary, administrative & economic reforms under the Khiljis & the Tughlaqs.

III. Bhakti &Sufi Movements.

IV.Provincialkingdoms: Mewar, Bengal, Vijaynagara & Bahamanis.

V. Second Afghan State.

VI. Emergence and consolidation of Mughal State, C.16th century to mid 17th century.

VII. Akbar to Aurangzeb: administrative structure-Mansab & Jagirs, State & Religion, Socio-Religious Movements.

VIII. Economy, Society &Culture under the Mughals.

IX. Emergence of Maratha Power.

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হাবিব ইরফান, মধ্যযুগের ভারতের অর্থনৈতিক ইতিহাস, (Economic History of Medieval India: A Survey), প্রগ্রেসিভ পাবলিশার্স

হাবিব ইরফান, মধ্যকালীন ভারত ১-৪ খন্ড (Medieval India)কে পি বাগচি এন্ড কোং, কলকাতা হাবিবুল্লাহ এ বি এম, ভারতে মুসলিম শাসনের প্রতিষ্ঠা ১২০৬-১২৯০, (The Foundation of Muslim Rule in

India), প্রগ্রেসিন্ড পাবলিশার্স, কলকাতা

রায় অনিরুদ্ধ ও চট্টোপাধ্যায় রত্নাবলী, মধ্যযুগে বাংলার সমাজ ও সংস্কৃতি, কে পি বাগচি এন্ড কোং, কলকাতা ১৯৯২

রায় অনিরুদ্ধ, মধ্যযুগের ভারতের ইতিহাস : সুলতানি আমল, ওরিয়েন্ট লংম্যান, কলকাতা করিম আব্দুল, বাংলার ইতিহাস : সুলতানি আমল, ঢাকা

CC-4/GE-4 History of India; 1707-1950.

- I. Interpreting the 18th Century.
- II. Emergence of Independent States & establishment of Colonial power.
- III. Expansion & consolidation of Colonial Power upto 1857.
- IV.Uprising of 1857: Causes, Nature & Aftermath.
- V. Colonial economy: Agriculture, Trade & Industry.

VI.Socio-Religious Movements in the 19th century.

VII. Emergence & Growth of Nationalism with focus on Gandhian nationalism.

VIII. Communalism: Genesis, Growth and partition of India.

IX. Advent of Freedom: Constituent Assembly, establishment of Republic.

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বন্দ্যোপাধ্যায় শেখর, পলাশী থেকে পার্টিশন: আধুনিক ভারতের ইতিহাস, ওরিয়েন্ট লংম্যান, ২০০৪

ভট্টাচার্য সব্যসাচী, ঔপনিবেশিক ভারতের অর্থনীতি, কলকাতা, ২০০০

সুনীল সেন, ভারতে কৃষিকার্য ১৭৯৩-১৯৪৭, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ, ১৯৮৫

চৌধুরী বিনয় ভূষণ, ঔপনিবেশিক আমলে বাংলার কৃষি ইতিহাস, কে পি বাগচি এন্ড কোং, কলকাতা

ইসলাম, সিরাজুল, বাংলার ইতিহাস ঔপনিবেশিক শাসনকাঠামো, চয়নিকা, ঢাকা, ২০০২

চক্রবর্তী মৃণাল, সিরাজ-উদ্-দৌলা, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ,কলকাতা, ১৯৮১

রায় রজতকান্ত, পলাশীর ষড়যন্ত্র ও সেকালের সমাজ, আনন্দ পাবলিশার্স, কলকাতা

চৌধুরী সুশীল, পলাশীর অজানা কাহিনী, আনন্দ পাবলিসার্স,কলকাতা

আলি এম আত্থার, আওরঙ্গজেবের সময়ে মুঘল অভিজাত শ্রেণী(The Mughal Nobility under Aurangzeb) কে পি বাগচি এন্ড কোং, কলকাতা

বন্দ্যোপাধ্যায় শেখর, অষ্টাদশ শতকের মুঘল সংকট ও আধুনিক ইতিহাস চিন্তা, কলকাতা,১৯৮৩

ভদ্র গৌতম, মুঘল যুগে কৃষি অর্থনীতি ও কৃষক বিদ্রোহ, সুবর্ণরেখা, কলকাতা, ১৯৮৩

চন্দ্র সতীশ, মুঘল দরবারে দল ও রাজনীতি, (Parties and politics at the Mughal Court 1707-1740) কে পি বাগচি এন্ড কোং, কলকাতা

চৌধুরী বিনয় ভূষণ ও অন্যান্যরা, বাংলার কৃষি সমাজের গঠন, কে পি বাগচি এন্ড কোং, কলকাতা

হাবিব ইরফান, মধ্যকালীন ভারত, খন্ড ১-৪, কে পি বাগচি এন্ড কোং, কলকাতা

হাবিব ইরফান, মুঘল সাম্রাজ্য ও তার পতন- একটি সমীক্ষা, পশ্চিমবঙ্গ ইতিহাস সংসদ,২০০০

হাবিব ইরফান, মুঘল ভারতের কৃষি ব্যবস্থা, (The Agrarian System of Mughal India(1556-1707)), কে পি বাগচি এন্ড কোং, কলকাতা

হাবিব ইরফান, মধ্যযুগের ভারতের অর্থনৈতিক ইতিহাস, (Economic History of Medieval India: A Survey), প্রগ্রেসিভ পাবলিশার্স, কলকাতা, ২০০৯

হাবিব ইরফান, ভারতের ইতিহাস প্রসঙ্গঃ মার্কসীয় চেত্তনার আলোকে(Essays in Indian History: Towards a Marxist Perception), ন্যাশনাল বুক এজেন্সি, কলকাতা, ১৯৯৯

রায় অনিরুদ্ধ, মধ্যযুগের ভারতের অর্থনৈতিক ইতিহাস, ১২০০-১৭৫৭, প্রগ্রেসিভ পাবলিশার্স, কলকাতা রায় অনিরুদ্ধ, মুঘল যুগের অর্থনৈতিক ইতিহাস, কে পি বাগচি এন্ড কোং, কলকাতা

সরকার জগদীশ নারায়ন, মুঘল অর্থনীতিঃ সংগঠন এবং কার্যক্রম, (Mughal Economy : Organisation and Working) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, কলকাতা ১৯৯১

সিদ্দিকী নোমান আহমেদ, মোঘল রাজত্বে ভুমিরাজস্ব পরিচালন ব্যবস্থা (১৭০০ – ১৭৫০)(Land

Administration Under the Mughals (1700 -1750)) পার্ল পাবলিশার্স, কলকাতা, ১৯৮০

মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস (২য় থন্ড)

(মুঘল ও ব্রিটিশ ভারত,পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ,কলকাতা ১৯৯৮

চট্টোপাধ্যায় রত্নাবলী, মুঘল যুগের দরবারি চিত্রকলা, থীমা, কলকাত

বন্দ্যোপাধ্যায় শেখর, পলাশি থেকে পার্টিশান (From Plassey to Partition), ওরিয়েন্ট লংম্যান

দেশাই এ আর, ভারতীয় জাতীয়তাবাদের সামাজিক পটভূমি, (Social Background to Indian Nationalism) কে পি বাগচি এন্ড কোং, কলকাতা

জয়া চ্যাটার্জী, বাংলা ভাগ হলঃ হিন্দু সাম্প্রদায়িকতা ও দেশ-বিভাগ, ১৯৩২-১৯৪৭

(Bengal Divided : Hindu Communalism and Partition 1932 – 1947) এল আলমা পাবলিকেশনস, কলকাতা, ২০০৩

দত্ত রজনী পাম, আজিকার ভারত (India Today)

সরকার সুশোভন, বাংলার রেনেসাঁস, (Notes on Bengal Renaissance), দীপায়ন, কলকাতা

ত্রিপাঠী অমলেশ, ভারতের মুক্তিসংরামে চরমপন্থী পর্ব, (The Extremist Challenge) আনন্দ পাবলিশার্স, কলকাতা

মুথোপাধ্যায় হীরেন্দ্রনাথ, ভারতবর্ষের ইতিহাস(২য় থন্ড) (মুঘল ও ব্রিটিশ ভারত) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ৪র্থ মুদ্রণ, ১৯৯৮

সুর নিখিল, ভারতীয় জাতীয়তাবাদী আন্দোলনের পটভূমি, পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৮৯ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৮৫৮-১৯২০) (১ম খন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৯৮ চট্টোপাধ্যায় প্রণবকুমার, আধুনিক ভারত (১৯২০-১৯৪৭) (২য় খন্ড) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৯৯ সেন সুনীল, ভারতে কৃষিসম্পর্ক(১৭৯৩-১৯৪৭)(Agrarian Relations in India (1793-1847)) পশ্চিমবঙ্গ রাজ্য পুস্তুক পর্ষদ, ১৯৮৫

DSE <u>Discipline Specific Elective</u> (Any Two):

DSE -A -1: National Liberation Movements in 20th century World

I.Nationalism: Theory and Practice.

II. Nature of Imperialism and colonialism

III. National Movements in Nigeria, Kenya, Congo, Angola &South Africa.

IV.China between 1911-1949:Revolution of 1911,May Fourth Movement and Cultural Revolution under Mao Tse Tung. Indonesian Revolution 1945-1949.V. National Movement in India.

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ত্রিপাঠী অমলেশ, স্বাধীনতা সংগ্রামে ভারতের জাতীয় কংগ্রেস, আনন্দ পাবলিশার্স, কলকাতা চন্দ্র বিপান, আধুনিক ভারতঃ ঔপনিবেশিকতাবাদ ও জাতীয়তাবাদ(Nationalism and Colonialism), কে পি বাগচি এন্ড কোং, কলকাতা চন্দ্র বিপান এবং অন্যান্য, ভারতের স্বাধীনতা সংগ্রাম, (India's Struggle for Independence) কে পি বাগচি এন্ড কোং, কলকাতা চন্দ্র বিপান এবং অন্যান্য, ভারতবর্ষ – স্বাধীনতার পরে, (India after Independence), আনন্দ পাবলিশার্স, কলকাতা

DSE- A -2: Some Aspects of European History: C.1780-1945

I. The French Revolution: Genesis Nature & Consequences

II.Napoleonic Era and aftermath.

III.Revolutions of 1830 & 1848.

IV.Unification of Italy & Germany.

V.Social and economic Changes.

VI. Imperialist Conflicts: World War I

VII.Rise of Fascism and Nazism.

VIII. Origins of World War II

References:

E.J. Hobsbawn: The Age of Revolution. London : Weidenfeld & Nicolson, 1962.
Lynn Hunt: Politics, Culture and Class in the French Revolution. Berkeley: University of California Press, 1984.
Andrew Porter, European Imperialism, 18760 -1914 (1994).
E.J. Hobsbawm, The Age of Extremes, 1914 - 1991, New York: Vintage, 1996
Carter V. Findley and John Rothey, Twentieth-Century World, Boston: Houghton-Mifflin, 5th ed. 2003

DSE- B-1: Patterns of Capitalism in Europe: C.16TH Century to early 20th Century

I.Definitions & Concepts

II.Commercial Capitalism: 1500-1700

III.Industrial Revolution in England: Causes & Nature

IV.Industrial Capitalism in France: Genesis & Nature

V. Growth of Industries in Germany

VI.Impact of Industrial Revolution on European Society, Polity & Economy.

References:

Jerry Müller, The Mind &the Market, Knopf Doubleday Publishing Group, 2007 Karl Polanyi, The Great Transformation : *The Political and Economic Origins of Our Time*. Boston: Beacon Press 1944. Joseph Schumpeter, Capitalism, Socialism &Democracy New York: Harper & Row, 1942. Wallerstein, World System Analysis: An Introduction, 2004 Cipolla Carlo, M, Fontana Economic History of Europe, VOL I&II Collins, 1973. Christopher Hill, From Reformation to Industrial Revolution, Weidenfeld and Nicolson, 1967 Jan De Vries, The Industrial Revolution &the Industrious Revolution, 1994

DSE-B-2: Some aspects of Society & Economy of Modern Europe: 15Tth – 18 th Century

1: Historiographical Trends

II. Feudal Crisis: Main strands

III. Renaissance: Origin, Spread &Dominant Features

IV. European Reformation: Genesis, nature & Impact

V. Beginning of the era of colonization: motives; mining and plantation; the African slaves

VI. Economic developments of the sixteenth century; Shift of economic balance from the Mediterranean to the Atlantic

VII. Transition from Feudalism to Capitalism: Industrial Revolution in England

References:

J H Plumb, The Pelican Book of the Renaissance, Penguin, 1982 G. R. Elton, Reformation Europe 1517,1559, Wiley, 1999 Ralph Davis, The Rise of the Atlantic Economies, New York, 1973 Arvind Sinha, Europe in Transition, Delhi, 2010 Rodney Hilton, The Transition from Feudalism to Capitalism, Delhi,2006. Fernand Braudel, Civilization and Capitalism, Vols. I, II, III, California, 1992 Butterfield, Herbert. The origins of modern science. Vol. 90507. Free Press, 1997 গৌতন চট্টোপাধ্যায় সম্পাদিত: দুশো বছরের আলোকে, পশ্চিমবঙ্গ ইতিহাস সংসদ, ১৯৮৯ চক্রবর্তী, ফরাসী বিপ্লব, পশ্চিমবঙ্গ পুস্তক পর্ষদ, কলকাতা চক্রবর্তী সুভাষ রঞ্জন, ইউরোপের ইতিহাস, পশ্চিমবঙ্গ পুস্তক পর্ষদ, কলকাতা, ১৯৮৬ জ্যাকসন টি এ, ফরাসী বিপ্লব – দশ দিগন্ত, কে পি বাগচি এন্ড কোং, কলকাতা ২০০৪ টমসসন ডেভিড, বিশ্ব ইতিহাসের প্রেক্ষাপটে ইউরোপ, ১ম থন্ড (১৭৮৯-১৮৫০), ২য় থন্ড (১৮৫১-১৯১৪) প্রগ্রেসিন্ড পাবলিশার্স, কলকাতা ২০০২ ও ২০০৩ রায় সিদ্ধার্থ গুহ, আধুনিক ইউরোগঃ ফরাসী বিপ্লব থেকে দ্বিতীয় বিশ্বযুদ্ধ, প্রগতিশীল প্রকাশক, কলকাতা, ২০১৩

Skill Enhancement Elective Course (SEC) Credits,-2

SEC-A-1: Historical Tourism: Theory & Practice

I. Defining Heritage

Art &Architecture in India: An overview: Field Work: Visit to historical sites &Museums **II. Understanding Built Heritage:** Stupa Architecture Temple Architecture Indo Persian Architecture, Forts, Palaces, Mosques Colonial Architecture Present day structures **III. Field Work: Visit to site &Conducting of research IV. Modalities of conducting tourism**

References:

Sunil Kumar, The Present in Delhi's Past, Delhi, Gyan Publishing House, 2002
Peter Howard, Heritage: Management, Interpretation, Identity, and London, 2003
V.S Agarwal, Indian Art, Varanasi, Prithvi Prakasahan, 1972
Percy Brown, Indian Architecture, Bombay, D.B.Taraporevala Sons &Co, 1940
James Harle, The Art & Architecture of the Indian Subcontinent, Hormonds worth, Penguin, 1988
S.K.Bhowmik, Heritage Management: Care, Understanding & Appreciation of Cultural Heritage, Jaipur, 2004.

SEC-B -1: Museums & Archives in India

I. Definitions

II. History of setting up of Museums and Archives: Some case Studies

III. Field Work; Studying of structures & Functions

IV. Training & Employment

References:

G. Edson & Dean David, Handbook for Museum, London, Routledge, 1986 John Ridener, From Folders to Post Modernism: A Concise History of Archival Theory, 2009 Roychowdhury, Madhuparna. Displaying India's Heritage : Archaelogy and the Museum Movement in Colonial India. Delhi: Orient Blackswan 2015 Sengupta, S. Experiencing History Through Archives. Delhi: Munshiram Manoharlal.2004.

SEC-A -2: Indian History & Culture

I. Environment; Culture, Tradition & Practices:

-Historical overview -Oral &codified information on medicinal Plants -Water & Water Bodies -Fieldwork **II.** Urbanization & Urbanism: -Issues of settlements & Landscapes -Social differentiations -Communication networks **III. Social inequality & Gender:** -Status within Households: An overview -Present context -Issues of Violence -Employment, distribution of resources **IV.Cultural Heritage:** -Main components -Built Heritage -Historical Tourism V. Cultural Forms & Cultural Expressions: - Performing Arts -Fairs & Festivals -Fieldwork **References:** Indu Banga, ed. The City in Indian History: Urban Demography, Society & Polity, Delhi, Manohar, 1991 Koch, E. Mughal Art & Imperial Ideology, New Delhi ; New York : Oxford University Press, 2001. Radha Kumar, History of Doing: An Illustrated Account of Movements for Women's Rights &Feminism in India 1880-1990, Zubaan, 2007

V.Vasudev, Fairs & Festivals, Incredible India Series, 2007

V.Singh, The Human Footprint on Environment: Issues in India, New Delhi, and Macmillan, 2012

B. Parikh, Composite Culture in a multicultural Society, Delhi, NBT,2007N. Mehta, Introduction: Satellite Television, Identity &Globalization in Contemporary India in N.Mehta, ED, Television in India, New York, Routledge, 2008

SEC-B- 2: Orality and Oral Culture in India

I. Defining orality

II. History & Historiography of Orality

III. Life Histories: Sociological Aspects

IV. Research Methodologies

V. Documentation: Written & Visual

References:

H. Roberts. Ed. Doing Feminist Research, London: Routledge &Kegan Paul, 1981John Miles Foley, Oral Formulaic-Theory: An Introduction &Annotated Bibliography, New York & London: Garland, 1985M.F.D. Knowledge & Control, London, 1971

Prasad M. Mahadeva, Ideology of the Hindi Film: A Historical Construction. Delhi: OUP, 1998 Srirupa Roy,' The Post Colonial State &Visual Representations of India'' Contributions to Indian Sociology, 2006, 36,1&2:233-263

Stephen Humphries: The Handbook of Oral History: recording life stories. University of Michigan : Inter-Action Inprint, 1984.

Veena Das, ed, Mirrors of Violence: Communities, Riots & Survivors in South Asia, Delhi,OUP,1990



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12/18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

<u>SI.</u> No.	<u>Subject</u>	<u></u>	Subject
1	Anthropology (Honours / General)	29	Mathematics (Honours / General)
2	Arabic (Honours / General)	30	Microbiology (Honours / General)
3	Persian (Honours / General)	31	Mol. Biology (General)
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)
5	Bio-Chemistry (Honours / General)	33	Physical Education (General)
6	Botany (Honours / General)	34	Physics (Honours / General)
7	Chemistry (Honours / General)	35	Physiology (Honours / General)
8	Computer Science (Honours / General)	36	Political Science (Honours / General)
9	Defence Studies (General)	37	Psychology (Honours / General)
- 10	Economics (Honours / General)	38	Sanskrit (Honours / General)
11	Education (Honours / General)	39	Social Science (General)
12	Electronics (Honours / General)	40	Sociology (Honours / General)
13	English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)
15	Environmental Studies (AECC2)	43	Women Studies (General)
16	Film Studies (General)	44	Zoology (Honours / General)
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries - IFFV (Major)
18	French (General)	46	Sericulture - SRTV (Major)
19	Geography (Honours / General)	47	Computer Applications - CMAV (Major)
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)
21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales Management – ASPV (Major)
22	History (Honours / General)	- 50	Communicative English CMEV (Major)
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Dietetics CNDV (Major)
24	Home Science Extension Education	52	Bachelor of Business Administration (BBA)
	(General)		(Honours)
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design – (B.F.A.D.) (Honours)
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)
27	Human Rights (General)	55	B. Music (Honours / General) and Music (General)
28	Journalism and Mass Communication (Honours / General)		-

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar

University of Calcutta B.A. (Hons.) Journalism and Mass Communication (JORA) Three Year Degree Course Under Choice Based Credit System (CBCS)

Course Type	Total Papers	Credits [Theory +	- Tutorial]& [Theo	ry + Practical]
Core Courses	14	14X5=70	14X4=56	84
		14X1=14	14X2=28	
Discipline	4	4X5=20	Same	24
Specific Course		4X1=4		
Generic	4	4X6=24	Same	24
Electives				
AECC	2	2X2=4	Same	4
SEC	2	2X2=4	Same	4
Totals	26			140

Course Structure: Semester wise distribution of Courses:

	Core Courses CC	AECC	SEC	DSE	Credits
Sem-	JORA-CC-1-1-TH	English			CC1=6
1	Introduction to	, MIL			CC2=6
400	Journalism;				AECC=2
marks	JORA-CC-1-1-P				GE1=6
20Cr.	Introduction to				
	Journalism;				
	JORA-CC-1-2-TH+TU				
	History of Indian				
	Journalism				
	CC1=Th-4;P-2				Total=20
	CC2=TH-5;TU-1;				
Sem-	JORA-CC-2-3-TH+TU	English			CC3=6
2	Reporting and Editing	, MIL,			CC4=6
400	JORA-CC-2-4-TH	EVS			AECC=2
marks	Introduction to Media				GE2=6
20Cr.	and Communication				
	JORA-CC-2-4-P				
	Journalism Practical				
	CC3=TH-5;TU-1;				Total=20

	CC4=TH-4;P-2			
Sem-	JORA-CC-3-5-TH+TU	JORA-SEC-		CC5=6
3	Communication Media,	A-3:		CC6=6
500	Society	(any one)		CC7=6
marks	JORA-CC-3-6-TH+TU	JORA-SEC-		SEC-A=2
26Cr	Media and Cultural	A-3-1		GE3=6
	Studies;	Radio		
	JORA-CC-3-7-TH	writing &		
	Introduction to Radio	presentation		
	JORA-CC-3-7-P			
	Radio Practical	JORA-SEC-		
		A-3-2		
		Photo		
		Journalism;		
	CC5,CC6=TH-5;TU-			Total=26
	1;CC7=TH-4;PR-SEC=2			
Sem-	JORA-CC-4-8-TH+TU	JORA-SEC-		CC8=6
4	Media Management,	B-4:		CC9=6
500	Press Laws	(any one)		CC10=6
marks	JORA-CC-4-9-TH	JORA-SEC-		SEC-B=2
26Cr	Introduction to Television	B-4-1		GE4=6
	JORA-CC-4-9-P	Documentary		
	Television Practical	Production;		
	JORA-CC-4-10-TH+TU	JORA-SEC-		
	Film Studies	B-4-2		
		Feature		
		Production		
	CC8,CC10=TH-5;			Total=26
	TU1;CC9=TH4;PR2;			
	SEC=2;			
Sem-	JORA-CC-5-11-TH	JORA-DSE-	(Anyone in Sem-V)	CC11=6
5	Introduction to New	A-	JORA-DSE-A-5-1	CC12=6
400	Media		for Sem-V	DSE=6+6
marks	JORA-CC-5-11-P		Global Media &	(Any
24Cr	Introduction to New		Politics	Two)
	Media Practical		OR	
	JORA-CC-5-12-TH+TU		JORA-DSE-A-5-2	
	Development		for Sem-V	
	Communication		Media, Human	
			Rights, Gender and	
			Env. Studies	

			(Anyone in Sem-VI)	
			JORA-DSE-A-6-3	
			for Sem-VI	
			Dissertation with	
			Presentation;	
			OR	
			JORA-DSE-A-6-4	
			for Sem-VI	
			Political	
			Communication	
	CC11=TH-4;PR-2			Total=24
	CC12=TH-5;TU-1;			
	DSE(2)=TH-5;TU-1			
Sem-	JORA-CC-6-13-TH	JORA-DSE-	(Anyone in Sem-V)	CC13=6
6	Advertising	В-	DSE-B-5-1	CC14=6
400	JORA-CC-6-13-P		for Sem-V	DSE=6+6
marks	Advertising Practical		Multimedia	(Any
24Cr	JORA-CC-6-14-TH+TU		Journalism	Two)
	Public Relations		OR	
			DSE-B-5-2	
			for Sem-V	
			Communication	
			Research and	
			Methods	
			(Anyone in Sem-VI)	
			DSE-B-6-3	
			for Sem-VI	
			Folk&CommunityMe	
			dia	
			OR	
			DSE-B-6-4	
			for Sem-VI	
			Health & Science	
			Communication	
	CC13=TH-4;PR-2			Total=24
	CC14=TH-5,TU-1;			
	DSE(2)=TH-5,TU-1	 		
			Grand Total	140

Division of Marks (Out of 100)

	Programme	Credit Hours
Attendance	10	
Internal	10	
Assessment		
Exam. (100)	15 for 1 Credit	1hr. per week
	65 for 5 Credits	5hrs. per week
1 Credit for	Term Paper,	University
each course	Seminar,	Programme
	Assignments	
	etc.	
5 Credits	University	University
	Question	Programme
For Practical	30 for 2 credits	4hrs. per week
based papers:	50 for 4 credits	4hrs. per week
Exam. (100)	Univ. Prog.	

- 65 Marks for theoretical segments; 15 marks for Tutorial segments (CC2, CC3, CC5, CC6, CC8, CC10, CC12, CC14);
- 50 marks for theoretical segments; 30 marks for Practical segments (For CC1, CC4, CC7, CC9, CC11, CC13);
- Upto 2000 words for one term paper/upto 1000 words for each of the two Term Papers / equivalent to Book Review / equivalent to comprehension. Report presentation / Poster presentation / Field work based on syllabus-related and/or current topics (may be done in groups) [The modes / themes and/or topics are to be decided by the concerned faculty of respective colleges.
- Laboratory Requirements for Journalism (Hons. + Gen.):

(a) All Laboratories should be Airconditioned;

(b) One Computer Teacher, having suitable experiences in computer operation, film making/editing;

- (c) Laboratory Attendant to be appointed;
- (d) Sound-proof studio (optional);
- (e) Recording System (Audio & Video);
- (f) Hi-speed Internet connection;

(g) Necessary Software to be installed: Page-making Software; Photo Editing Software; Video Editing Software; Audio Editing Software; Bangla Software (Unicode).

• The Pedagogy:

The teaching-learning of the programme would be organized through lectures, tutorials, practicals, projects, presentations, workshops, seminars and hands-on training using ICT extensively. Practical sessions are incorporated as an important component in most of the papers, with hands-on training in the use of various equipment, such as Cameras, Editing Machines etc.
• Examination:

For each practical based course the question pattern shall be:

Types of Questions	Marks Allotted	Number of questions	Total Marks (100)
Inte	ernal Assessn	nent	10
	Attendance		10
Objective types	1 (One)	10	10
Short Answer Type	2 (Two)	5	10
Subjective Type	15	2	30
	Practical		30

• For each theory based course the question pattern shall be:

Types of Questions	Marks Allotted	Number of questions	Total Marks (100)
Inte	ernal Assessn	nent	10
	Attendance		10
Objective types	1 (One)	10	10
Short Answer Type	2 (Two)	5	10
Subjective Type	15	3	45
Tutorial based Assessment			15

Semester – 1

JORA-CC-1-1-TH: Introduction to Journalism

Marks=50 (4 Credits)

Total Classes: TH: 4hrs Per Week

Unit 1

News: meaning and concept, Hard news vs. Soft news, attribution, verification, balance and fairness, brevity, dateline, credit line, byline; Different forms of print-A historical Perspective, Penny press, Tabloid press.

Unit 2

Language of news- Robert Gunning: Principles of clear writing Rudolf Flesch formula- skills to write news;Sociology of news: Factors affecting news treatment, Paid news andYellow journalism,Agenda Setting, Trial by media, gatekeepers; Politics of news; Neutrality and bias in news.

JORA-CC-1-1-P: Introduction to Journalism-Practical Marks=30 (2 Credits)

Total Classes: PR: 4hrs. Per Week

Unit-3 (Practical)

Basic knowledge of Computer for print journalism; Handling Page Making Software and Photo Editing Software; Writing a News Report from given points; Writing Headlines from News Stories; Writing Intro; language of news.

Unit-4 (Practical)

Rewriting and Summarizing a given piece of news with headlines and suitable intro; Creating a sample page on computer with hard and soft news; Writing Anchor Story; Writing article; Assignment: Preparing a presentation on types and categories of News.

Readings:

(1) John Hohenberg: Professional Journalists; Thomson Learning.

- (2) M.V. Kamath: Professional Journalism; Vikas Publishing, New Delhi.
- (3) Sourin Banerjee: Reporting and Editing Practice;
- (4) M.K. Joseph: Outline of Reporting;
- (5) K.M. Srivastava News Reporting and Editing;
- (6) Sourin Banerjee: Journalism Update; PragatishilProkashak.
- (7) Lynette Sheridan Burns: Understanding Journalism; Vistaar Publications;
- (8) Tony Harcup: Journalism: Principles and Practice; Sage.

JORA-CC-1-2-TH+TU: History of Indian Journalism

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Early Indian Journalism: Contributions of James Augustus Hickey, James Silk Buckingham and Calcutta Journal, Serampore Baptist Missionary Press: Digdarshan, SamacharDarpan; Social Reform Movement and Raja Rammohan Roy.

Unit-2

H.L.V. Derozio and Young Bengal Movement, Iswar Chandra Gupta and SambadPrabhakar; History of Press Ordinances and Liberation of Press; Inception and Rise of Nationalist Journalism: Hindu Patriot and contributions of Harish Chandra Mukherjee, Somprakash; Movement against Vernacular Press Act.

Unit-3

Extremist Press: Sandhya, Bande-Mataram and Jugantar; Contribution of Bipin Chandra Pal and BalGangadharTilak; Contribution of Mahatma Gandhi in Indian Journalism; Contributions of Nationalist Press in Freedom Movement: National Herald, TheHindstan Times, The Indian Express.

Unit-4

Recommendations of Indian Press Commissions; Rise of newspaper houses: Ananda Bazar Patrika - The Telegraph, National Herald, The Hindu, The Times of India, The Statesman; Development of News Agencies; Contributions of Eminent Journalists: M. Chalapathi Rau, Vivekananda Mukhopadhyay, BarunSengupta, DilipPadgaonkar, N.Ram.

Readings:

(1) J.N. Basu: Romance of Indian Journalism; University of Calcutta.

- (2) SushovanSarkar: Bengal Renaissance and Other Essays;
- (3) J. Natarajan: History of Indian Journalism; Publication Division.
- (4) RangaswamyParthasarathi: Journalism in India; Sterling Publishing, New Delhi.
- (5) MohitMoitra: A History of Indian Journalism; National Book Agency.
- (6) K.K. Ghai: Indian Government and Politics; Kalyani Publishers.
- (7) Recommendations of First Press Commission.
- (8) D.C. Bhattacharya: Indian Politics and Government;
- (9) D.C. Bhattacharya: BharatiyaRajniti O ShashonByabostha;

Semester – 2

JORA-CC-2-3-TH+TU: Reporting and Editing

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

News: Elements, Values, Objectivity; Beat and Source: definitions, Principles of News (Report) Writing: Intro, Lead; Principles of Agency News; Principle of Page Making; Interviewing: Research, planning, framing questions, writing the piece; Feature: Definition, Types; Advertorials.

Unit-2

Positions, qualities, duties and responsibilities of: Correspondents: Special Correspondent, District Correspondent, Foreign Correspondent; Columnist, Photo Journalist, News Coordinator, Executive Editor, Assistant Editor, Chief Reporter, Chief Sub-Editor, Sub-Editor, News Editor, Chief of News Bureau; Headline: types, importance, writing headline for newspaper; Principle of writing an Editorial, Post Editorial; Principles of Sub-Editing;

Unit-3

Specialization in Journalism: Interpretative and Investigative Journalism, Political Journalism, Crime and Legal Journalism, Public Affairs Reporting, Human Interest Stories and Human Rights Reporting, Corporate, Economic, Financial and Business Journalism.

Unit-4

Agriculture Journalism, Science Journalism, Sports Journalism, Film Journalism, Environment Journalism, Fashion and Entertainment Journalism, Page-3 Reporting, Column Writing, Writing for Magazine, Special and supplementary Pages.

Readings:

(1) John Hohenberg: Professional Journalists; Thomson Learning.

- (2) M.V. Kamath: Professional Journalism; Vikas Publishing, New Delhi.
- (3) Leonard Ray: Into the Newsroom; Globe Pequot Pr; Subsequent edition.
- (4) Sourin Banerjee: Reporting and Editing Practice;
- (5) M.K. Joseph: Outline of Reporting;
- (6) K.M. Srivastava News Reporting and Editing; Sterling Publishers Pvt Ltd (2003).
- (7) Sourin Banerjee: Journalism Update; PragatishilProkashak.
- (8) Lynette Sheridan Burns: Understanding Journalism; Vistaar Publications;

Marks= 50 (4 Credits)

Total Classes: TH: 4hrs. Per Week

Unit-1

Communication: Definition, Processes and Semiotic school; Forms of Communication (verbal, non-verbal, paralanguage, iconic, semiotic etc.), Levels of Communication (intrapersonal, interpersonal, group, public, mass communication), Functions of communication and mass communication (surveillance, correlation, transmission, entertainment, validation, mobilization)

Unit-2

Role of Media in a Democracy: Responsibility to Society, Contemporary debates and issues relating to media; Online journalism, Citizen Journalism;Covering news: Covering Speeches, Meetings and Press Conferences; Covering of beats- crime, courts, city reporting, local reporting, hospitals, health; education, sports; Understanding new media: e-mail, social media; Ethics in journalism.

Readings:

(1) Vir Bala Agarwal &V.S.Gupta: Handbook of Journalism & Mass Communication; Concept Publisher Delhi.

(2) Seema Hasan: Mass Communication; Principles and Concepts; CBS Publishers and Distributers.

JORA-CC-2-4-P: Introduction to Media and Communication Marks= 30 (2credits)

Total Classes: 4hrs. Per Week

Unit-3 (Practical)

Writing a News Feature; Writing feature on other topics of interest; Principles of Editing a given piece of News Report and Agency Copy including a suitable lead and headline; Writing Column; Book Review, Film Review, Review of Television Programmes, Writing Editorial, writing post-editorial, Writing Anchor Story.

Unit-4: (Practical)

Assignments: Publishing a Tabloid Journal using Page making software and photo editing software; Elements of page design including slug, info-graphics, blurbs, shoulder, reverse etc.

*10 candidates will make a Team for publishing each Journal;

*Installation of Bangla Software mandatory for both page make-up and editing.

Semester – 3

JORA-CC-3-5-TH+TU: Communication, Media, Society Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Classical Rhetoric form of Communication; Shannon-Weaver's Mathematical model of communication and criticism; Schramm-Osgood's Interactive model of communication; Newcomb's Systemic model and Westley-McLean's Mass Communication model; David Berlo's Linear model; Roman Jakobson's communication model; Basic concepts of Semiology: Sign, Code, Text.

Unit-2

Normative theories of press; Four Models of communication: Transmission Model, Ritual or Expressive, Publicity model, Reception model; McQuail's four theories of mass communication: Social scientific theory, Normative theory, Operational theory, Everyday or Common sense theory.

Unit-3

Phases of media society relations: Mass Society, Functionalism, Critical Political Economy, Technological Determinism, Information Society; Dominant media paradigm and Hypodermic series of models, One-step flow theory, Development paradigm of media: Two-step flow theory, Diffusion of Innovation and Media Dependency theory; Active Audience proposition: Uses and Gratifications model.

Unit-4

Cultivation Theory; Agenda Setting series of models (Priming-Framing-Gatekeeping-Agenda Setting); Spiral of Silence; Information Imbalance: McBride Commission; Globalization of media and Propaganda model; Understanding Media Conglomeration; Corporate (organizational) Communication models: Conduit Model, Grapevine model.

Readings:

(1) Denis McQuail: McQuail's Communication Theory; 4th, 5th and 6th Edition.

- (2) John Fiske: Introduction to Communication Studies; Routledge.
- (3) AbirChattopadhyay: Communication, Media and Cultural Studies; Progressive Publishers.
- (4) ArvindSinghal: Communication for Innovation; Sage.
- (5) AbirChattopadhyay: Jnapontatwo O Sankriti; Progressive Publishers.
- (6) Edward S. Herman and Noam Chomsky: Manufacturing Consent; Vintage.
- (7) Rogers Everett: Communication Technology: The News Media in Society, Coller-Macmillan.

London, 1988.

(8) Baran and Davis, Mass Communication Theory, Indian Edition, (South West Coengate Learning)2006

(9) Bernet, John R, (1989) Mass Communication, an Introduction, Prantice Hall.

(10) Morley, D. (1992) Television, Audiences and Cultural Studies. London and New York: Routledge.

JORA-CC-3-6-TH+TU: Media and Cultural Studies

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Frankfurt Critical School: Culture Industry; Semiotic School: Ferdinand De Saussure, C.S. Peirce, Roland Barthes: Meaning of text message, Signification, Myth; Birmingham School: Centre for Contemporary Cultural Studies; Marshall McLuhan: Medium is the Message.

Unit-2

Understanding Culture; Definitions of Culture: Mass Culture, Popular Culture, Folk Culture; Elite culture, Commercial culture; Media as Texts; Signs and Codes in Media, Discourse Analysis; Understanding Media Culture: Media Culture and Power; Assignments: understanding media Codes, Texts.

Unit-3

Ev. Rogers' Development communication school, Dominant Paradigm of Development Model; Communication and development of third world media: Indian experience; Public Sphere and Public Media: Jurgen Habermas; Corporatization and Globalization of Mass Media.

Unit-4

Political Economy of media, Ideology and Hegemony; Ideas of Cultural Studies: Colonialism, Postcolonialism, Nationalism, Internationalism, Hybrid Culture, Poststructuralism and Postmodernism; Representation of nation, class, caste and gender issues in Media (assignment based).

Readings:

(1) Denis McQuail: McQuail's Communication Theory; 4th, 5th and 6th Edition.

- (2) John Fiske: Introduction to Communication Studies; Routledge.
- (3) AbirChattopadhyay: Communication, Media and Cultural Studies; Progressive Publishers.
- (4) ArvindSinghal: Communication for Innovation; Sage.
- (5) AbirChattopadhyay: Jnapontatwo O Sankriti; Progressive Publishers.
- (6) Edward S. Herman and Noam Chomsky: Manufacturing Consent; Vintage.

(7) Rogers Everett: Communication Technology: The News Media in Society, Coller-Macmillan. London, 1988.

- (8) Dan Laughey: Key Themes in Media Theory; Rawat Publication.
- (9) Gupta, Nilanjana ed.(2006)Cultural Studies, World View Publishers.

(10)Hartley, J. (2002) Communication, Cultural and Media Studies: The Key Concepts (3rd Edition). London: Routledge.

(11) Ang, I. (1990) `Culture and Communication' in European Journal of Communication, Vol.5, Nos. 2 and 3, pp.239-260.

(12) Siebert, F., Schramm, W. and Peterson T. (1956) Four Theories of the Press. Urbana, Illinois: University of Illinois Press.

JORA-CC-3-7-TH: Introduction to Radio

Marks=50 (4 Credits)

Total Classes: TH: 4hrs Per Week

Unit-1

History of AIR; Inception and Growth of Radio News in India; Educational Radio in Developing countries (Neurath Project); Development of entertainment programmes in AIR: reach and access; From Amateur or Ham to FM and Digitalization of Radio in India; Radio in democratic periphery: participatory, community driven, special need like disaster; Audience segment.

Unit-2

Autonomy of AIR: PrasarBharati; Radio formats: Community Radio, Campus Radio; National Programme in AIR; Radio Jockey: Role and Responsibilities.

Unit-3

Radio Magazine, Interview, Talk Show, Discussion, Feature, DocumentaryStudio interviews, Panel discussions, Phone-in programmes; Pre-Production for Radio Script: Writingradio commercials, teasers and promos;

JORA-CC-3-7-P: Introduction to Radio

Marks=30 (2credits)

Total Classes: 4hrs. Per Week

Unit-4 (Practical)

Radio Personnel; Radio Script: Pre-Production, Production skills; Copywriting; Field recordingskills, livestudio broadcast with multiple sources, Cuesheet and recording, news production; Editing, Creative use of Sound Editing (Computer based), special sound effects, Phone-in programme.

Readings:

(1) Mark W. Hall: Broadcast Journalism: An Introduction to News Writing;

- (2) K.M. Srivastava: Radio and Television; Sterling Publishers.
- (3) U.L. Baruah: This is All India Radio; Publications Division; Ministry of I&B, 2017.
- (4) P.C. Chatterjee: Broadcasting in India; Sage.
- (5) Carrol Fleming: The Radio Handbook; Routledge.
- (6) P.C Chatterjee, Broadcasting in India, New Delhi, Sage.

(7) VinodPavarala&Kanchan K. Malik: Other Voices; The Struggle for Community Radio in India, Sage.

JORA-SEC-A-3: Skill Enhancement Course (Any One)

JORA-SEC-A-3-1-TH: Radio Writings & Presentation

80 Marks (2 Credits)

Unit-1

Radio writing techniques: Writing for radio idioms and spoken word, elements of radio news; Radio feature, News reel, Radio Talk, Interview; Pre-production idea and research, radio script, storyboarding, proposal writing, budget, floor plan, pilot; Production: Use of sound, listening, recording, using archived sound; Editing: creative aspects of editing; Ethical issues.

Unit-2

Working in Radio news room; functions of recording room; Sound for Radio: different types-Sync/non-sync/natural and ambience sound; Frequency and Wavelength; Analogue to Digital Sound; Special effects, menu and synthesis.

Books and References for SEC-A-1: Readings of CC-7 to be followed.

OR

JORA-SEC-A-3-2-TH: Photo Journalism

80 Marks (2 Credits)

Unit 1

Introduction to Photo Journalism: basic needs of photography,Importance of photographs in print media;Evaluating Photo Journalist's job;Photo caption in print media, Analysis of a Photo Text, Handling Photography Equipments; Digital Photography;Ethics of Photo Journalism; Case Studies in Photo Journalism.

Unit 2

Understanding the mechanisms of Photography: Types of photographic cameras and their structure (Pin-hole, SLR, TLR, D-SLR); Lenses (types and their perspective/angle of view); Aperture (f-stop & T-stop); Shutters (Focal plane & Lens shutter); Light meters (Incident, reflected & through Lens: Average, Centre weighted, Spot & Metrics) and Focus and Depth of Field;

Assignment: Outdoor photo-shoot on 10 news based issues with suitable captions/analyses; editing of photographs with photo editing software.

Readings:

(1) Brian Horton: Associated Press Guide to Photo Journalism; McGraw Hill Education.(2)Martin Keene: Practical Photojournalism: A Professional Guide; AE Publications, UK.

Semester – 4

JORA-CC-4-8-TH Introduction to Television

Marks=50 (4 Credits)

Total Classes: TH: 4hrs Per Week

Unit-1

Public Service Broadcasting: Doordarshan: early days, introduction of news, commercials and entertainment; Satellite TV to Private TV; 24X7 news and news channels; narrowcasting and outside coverage; audience segment; Agenda Setting techniques used by TV channels; Ethical issues and recent sting operations.

Unit-2

Television programme format: Visual text: basics of visual, reporting skills and editing, graphics and special effects, camera positioning; TV news techniques: finding the story, packaging: use of clippings, PTC, VO, AVO; Viewership rating: TAM, TRP;

Unit-3

Presenting real lives in Television: constructing reality in reality shows; TV Talk Shows: Hosting, Legal pitfalls; Soap, News Magazine, Interview; Television Documentaries: understanding, writing a concept, script writing and shooting;

JORA-CC-4-8-P: Introduction to Television Marks=30 (2 Credits)

Total Classes: 4hrs. Per Week

Unit-4 (Practical)

Editing: Introduction to Video Editing, Camera and Shooting techniques, Editing Techniques, TV Script Writing.

Practical Exercise:

(a) Producing a Documentary Film (Duration: 8-15 Minutes) with Viva-Voce; OR(b) Producing a Feature Film (Duration: 5 Minutes) with Viva-Voce;

- Three candidates will make a Team for each Documentary Production;
- Candidates failing to appear in the examination or non-exhibition of video (duly signed by the college authority) on the day of examination will be treated absent.

Readings:

(1) John Riber: Writing and Production for Television and Film; Sage, India.

- (2) Ivor Yorke: Television Journalism; Focal Press.
- (3) Carl Bode: The Age of Television;
- (4) Robert C. Allen & Annette Hill: The Television Reader, Routledge.
- (5) Andrew Boid: Broadcast Journalism; Oxford.
- (6)E. Herbert Zettl, Television Production Handbook, Delhi : Akash Press, 2007.
- (7) Broughton, Iry. Art of Interviewing for Television, Radio & Film, Tab Books Inc. 1981.
- (8) Yorke, Ivor, Television News (Fourth Edition), Focal Press.
- (9) Robert c Allen and Annette Hill (Ed- 2004), The Television Reader, Routledge.

JORA-CC-4-9-TH+TU: Film Theories and Production

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Film and Cinema; Film as a medium of mass communication; History of Indian Motion Pictures; French New Wave Cinema: Left Bank and Cahier du cinema group; Italian Neo-Realist Movement; Auteur theory; An Overview of Iranian New Wave Cinema: Abbas Kiarostami, Mohsen Makmalbaf, Jafar Panahi; Imperfect Cinema of Latin America.

Unit-2

Overview of Indian New Wave: Satyajit Ray, Rittick Ghatak, Mrinal Sen, Shyam Benegal, Rituparno Ghosh, Aparna Sen, Mira Nair, Adoor Gopalkrishnan; Exploring contemporary Bombay cinema narratives: Satire, Action, Family melodrama, Masala films, Gangster films, Nationalist, Underworld drama, NRI narratives; History of Documentary Films; Animation cinema.

Unit-3

Film production: Pre-production, production and post-production; Basic camera shots and sequence; Direction; Editing, Dubbing, Lights, Sound Effects and Music; Language of cinema: Montage, Mise-en-scene.

Unit-4

History of Documentary Films (Global and Indian Perspectives); Documentary movements in India; Role of NFDC and Films Division; Role of CBFC in India; Contributions of Filmmakers: Akira Kurosawa, Ingmar Bergman, Sergei Eisenstein, Federico Felini, Charles Chaplin.

Readings:

- (1) James Monaco: How to Read a Film;
- (2) Angela Wadia: Television and Film Production; Kaniska Publisher.
- (3) Jill Nelmes: An Introduction to Film Studies; Psychology Press.
- (4) Satyajit Ray: Our Films Their Films;
- (5) KiranmoyRaha: Bengali Cinema;
- (6) ParthaRaha: Cinema r Itibritwo; Dey's Publisher.
- (7) Renu Saran: History of Indian Cinema; Diamond Books.
- (8) M. Madhava Prasad: Ideology of the Hindi Film: A Historical Construction; Oxford.

JORA-CC-4-10-TH+TU Media Management, Press Laws

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Media Ownership: types of various media ownership patterns; Changing patterns of Media management; Corporatization of mass media after globalization; FDI in Indian media; Managerial departments of newspaper and functions.

Unit-2

Dual Economy: Circulation versus Advertisement; Media Autonomy: Prasar Bharati experience; Digital Development of media and legal frameworks; DTH, TRP; Apex Regulatory and Publicity Bodies: ABC, NRS, DAVP, PIB, Publication Division, Films Division.

Unit-3

Freedom of Information and freedom of press: Indian experience; From Press Commission to Press Council of India: before and after globalization; Right to Information Act, Right to privacy.

Unit-4

Freedom of speech and expression; Media Laws: Defamation, Contempt of Court, Sedition, Official Secrets Act, Copyright Act, Press Registrations of Books Act, Obscenity Act, Working Journalists Act, Parliamentary Proceedings Act, Code of Ethics.

Readings:

(1) Gulab Kothari: Newspaper Management in India; Rajasthan PatrikaPvt Ltd.

(2) Herbert Lee Williams: Newspaper Organization and Management.Iowa State University Press.

(3) ArvindSinghal: India's Communication Revolution, Sage.

(4) VanitaKohli: The Indian Media Business, Response Books.

(5) BiplabLohoChowdhury: Media Management; Unique Books International.

(6) K.P Yadav: Media Management; Adhyayan Publishers & Distributors.

(7) DurgadasBasu: Press Laws in India; Prentice Hall of India.

(8) Bansi Manna: Press Laws in India; Academic Publisher.

(9) Bansi Manna: Bharater Press Aain; Academic Publisher.

(10) Debanjan Banerjee: Justice and Journalist; S.B. Enterprise

JORA-SEC-B-4: Skill Enhancement Course (Any One)

JORA-SEC-B-4-1: Documentary Film Production

80 Marks (2 Credits)

Unit 1

Understanding the Documentary film, Introduction to Realism, Debate; Observational and Verite documentary; Introduction to Shooting styles; Introduction to Editing styles; Structure and scripting the documentary;

Unit 2

Documentary Production, Pre-Production, Researching the Documentary, Research: Library, Archives, location, life stories, ethnography; Writing a concept: telling a story; Treatment; Writing a proposal and budgeting.

Readings:

(1) K P Jayasankar& Anjali Monterio: A Fly in the Curry: Independent Documentary Film in India Hardcover, Sage, 2015.

(2) Aparna Sharma: Documentary Films in India; Critical Aesthetics at Work; Palgrave, Macmillan.

JORA-SEC-B-4-2: Feature Film Production

Unit-1

Basic production concepts and elements of screenwriting for a low budget; Basic principles of camera composition and lighting for a "film look"; Developing story ideas from contemporaryevents, personal experiences, favorite movie genres; Making an outline of basic plot development (setup, confrontation, payoff); filling it in with descriptions of the action, and finally the dialogue;

Unit-2

Effective and efficient methods of shooting scenes for editing, and working with actors; Actual production of the class script(s); Evaluating raw footage and possible post-production fixes for faults; Editing the footage for maximum impact; Adding sound effects, ADR, and music scoring; finecut.

Books and references for SEC-B-2: Readings of CC-9 to be followed.

Semester – 5

JORA-CC-5-11-TH: Introduction to New Media

Marks=50 (4 Credits)

Total Classes: TH: 4hrs Per Week

Unit-1

Key Concepts and Theory: Defining new media, terminologies and their meanings – Digital media, new media, online, media; Overview of Online Journalism: Why newspapers and broadcast outlets are on the Web;Understanding Virtual Cultures and Digital Journalism; Information society and new media, Technological Determinism, Computer Mediated Communication (CMC), Networked Society.

Unit-2

Internet and its Beginnings, Remediation and New Media technologies, Online Communities,User Generated Content and Web 2.0, Networked Journalism, Alternative Journalism; Social, Media in Context, Activism and New Media; Citizen and Participatory Journalism: Hyperlocal Journalism; Security and Ethical Challenges in Online Journalism: Security challenges, Ethics of online journalism.

JORA-CC-5-11-P: Introduction to New Media Marks: 30 (2 Credits)

Total Classes: 4hrs. Per Week

Unit-3 (Practical)

Tools of Online Journalism: Multimedia, Interactivity, Hyperlinks, Weblogs and Content Management Systems (CMS); New Media and Social Networks: New Media, Social Networking and media activities; websites;

Unit-4 (Practical)

Linear and Non-linear writing, Contextualized Journalism, Writing Techniques, Linking, Multimedia, Storytelling structures, Visual and Content Design, Website planning and visual design, Content strategy and Audience Analysis, Brief history of Blogging, Creating and Promoting a Blog.

Readings:

(1) Vincent Miller. Understanding digital culture.Sage Publications, 2011.

(2) Lev Manovich. 2001. "What is New Media?" In The Language of New Media, Cambridge: MIT Press. pp. 19-48.

(3) Siapera, Eugenia. Understanding new media.Sage, 2011.

(4) Goldsmith, Jack, and Tim Wu. 2006. Who Controls the Internet? Illusions ofBorderless World. Oxford University Press US.

(5) Baym, Nancy K. Personal Connections in the Digital Age. Polity, 2010.

JORA-CC-5-12-TH+TU: Development Communication

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Development: Concept, concerns, paradigms; Concept of development, Measurement of development, Development versus growth, Human development, Development as freedom, Models of development, Basic needs model: Nehruvian model, Gandhian model, Panchayati raj, Developing countries versus developed countries, UN millennium dev goals.

Unit-2

Development communication: Concept and approaches, Paradigms of development: Dominant paradigm, dependency, alternative paradigm, Dev comm. models – diffusion of innovation, empathy, magic multiplier, Alternative Dev comm. approaches: Sustainable Development, Participatory Development, Inclusive Development, Gender and development, Development support comm. – definition, genesis, area woods triangle.

Unit-3

Role of media in development, Mass Media as a tool for development, Creativity, role and performance of each media-comparative study of pre and post-liberalization eras, Role, performance record of each medium- print, radio, TV, video, traditional media, Role of development agencies and NGOs in development communication;

Unit-4

Critical appraisal of dev comm. programmes and govt. schemes: SITE, Krishi Darshan, Kheda, Jhabua, MNREGA; Cyber media and dev –e-governance, national knowledge network, ICT for dev narrow casting Development support communication in India in the areas of: agriculture, health& family welfare, population, women empowerment, poverty, unemployment, energy and environment, literacy, consumer awareness.

Readings:

1. ArvindSinghal, Everett M Rogers: India's Communication Revolution: From Bullock Carts to Cyber Marts.

2. J V Vilanilam: Development Communication in Practice, India and the Millennium DevelopmentGoals. Sage. 2009.

3. K.Mahadavan, KiranPrasad,Youichi Ito and VijayanPillai. Communication, ModernisationandSocial Development: Theory Policy and Strategies (2 volumes), BR Publishing Corporation, NewDelhi. 2002.

4. Kiran Prasad. Communication for Development: Reinvesting Theory and Action (2 volumes,) BRPC: New Delhi. 2009.

5. MelkoteSrinivas R., H. Leslie Steeves. Communication for Development in the Third World:

Theory and Practice for Empowerment: Sage. 2001

6. Schramm, Wilbur: Mass Media and National Development, Stanford UP, Standford, 1964.

7. Uma Narula, W. Barnett Pearce. Development as communication: a perspective on India. SouthernIllinois University Press, 1986

8. Uma Narula. Development Communication: Theory and Practice. HarAnand. 2004.

9. K. Sadanandan Nair & Shirley A. White (Ed.): Perspectives on Development Communication; Sage.

10. DipankarSinha: Development Communication, Contexts for the 21st Century; Orient Black Swan.

For Semester-5 (Any One)

JORA-DSE-A-5: Discipline Specific Elective

JORA-DSE-A-5-1-TH+TU: Global Media & Politics

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Imbalances in Global Information Flow: Rise of International News Agencies; Toward an alternative World Communication Order and McBride Commission; International Media Regulations.

Unit-2

Gulf War and the rise of Global Media; Introduction to Global Media: NY Times, Wall Street Journal, Aljazeera. Major international television channels: BBC, CNN, FOX, CBC; Globalization of Media: Media Conglomeration Time-Warner, Viacom, Walt Disney Corporation, News Corporation, Bartelsmann, Vivendi International, GE, Sony.

Unit-3

Cross Culture Communication- Problems among nations, Press System of Neighbouring countries of Indian subcontinent before and after Globalization, Herbert Schiller: Concept of Media Imperialism; Media and Present Indian Market: Information War, Fake Information; Global Satellite system-Cable & Satellite TV (C&S), Direct To Home (DTH), Internet Protocal TV (IPTV).

Readings:

(1) DayaKishanThussu. International Communication: Continuity and Change, Oxford University Press ,2003.

(2) Yahya R. Kamalipour and Nancy Snow.War, Media and Propaganda-A Global Perspective, Rowman and Littlefield Publishing Group, 2004.

(3) "Many Voices One World" Unesco Publication, Rowman and Littlefield publishers, 2004.

(4) DayaKishanThussu .War and the media : Reporting conflict 24x7, Sage Publications, 2003.

(5) Lee Artz and Yahya R. Kamalipor. The Globalization of Corporate Media Hegemony, New York Press, 2003.

(6) Edward S. Herman & Robert McCheseney: Global Media; Madhyam Books.

For Semester-5

JORA-DSE-A-5-2-TH+TU: Media, Human Rights, Gender, Environment Studies

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Rights: inherent, inalienable, universal, indivisible; Values: Dignity, liberty, equality, justice, unity in diversity; Balance between Rights and Duties; Problems: Poverty, underdevelopment and illiteracy; Women, children and the disadvantaged groups;

Unit-2

Freedom and Responsibility, Freedom of Speech and Expression, Universal Declaration of Human Rights, National Human Rights Commission, State Human Rights Commissions, RTI, Right to Privacy.

Unit-3

Media exposure and Gender Construction, Media stereotypes in newspaper, Gender & Advertising, Indecent representation of women in media (Act), Masculinity and Femininity: Cultural Studies, Feminist movement and Media Studies;

Unit-4

Human Rights Institutions: Amnesty International; NGOs;Major Human Rights Issues in India; Presentation: Human Rights issues and violations in International scenario and media operations;

Readings:

1. UN Centre for Human Rights, Human Rights Training: A Manual on Human Rights Training Methodology (New York: UN, 2000).

2. UN Centre for Human Rights, Minority Rights (Geneva: World Campaign for Human Rights, 1998).

- 3. UNESCO, Human Rights of Women (Paris: UNESCO, 1999).
- 4. Basu, D.D., Human Rights in Constitutional Law (New Delhi: Prentice Hall, 1994).
- 5. Nagendra Singh, Enforcement of Human Rights (Calcutta : E L House, 1986).
- 6. UNESCO, Yearbook on Human Rights.

For Semester-6 (Any One)

JORA-DSE-A-6-3-TH+TU: Dissertation with Presentation Marks=100(6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

- Students will do a micro research project(7000 to 8000 words) on any topic of social, political, cultural interest. The dissertation must include proper reference, bibliography.
- Students getting the project accomplished have to prepare a suitable presentation (of 10 minutes) strictly on the topic for Viva-Voce.

For Semester-6

JORA-DSE-A-6-4-TH+TU: Political Communication

Marks=100(6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Political Communication- Definition; Relationship of politics with mediated communication; Theoretical approaches: Jurgen Habermas on Political Communication; Role of media in politics: Power or Democratic Participation; Media bias, political participation and media choice.

Unit-2

Mass persuasion and propaganda: Priming and Agenda Setting; Responsibilities of media in framing public opinion: Walter Lippmann, public policy, Noam Chomsky: Media Control; Channels of political communication; Mediation, facilitation and dialogue; Leadership, politics and social advocacy; Fundamentals of political engagement.

Unit-3

Identity politics in India: Role of mass media; The modern discourse of identity; Rhetoric of Social Movements, local assertions and its links to global assertions, Human Development Index, Development and Environmental Concerns - conflict of interests between economic and environmental concerns.

Unit-4

Symbolic and cultural forms of communication between politicians and their publics; Election campaign strategies; Coverage of election campaigns in Indian media; Opinion and Exit Polls: Political Framing. Political Advertisements; Digital Media and Political communication; Digital Political campaigning; Fundamentals of Digital political advertising; Social media strategies in political communication: Use of Facebook, Whatsapp and Twitter

Readings:

1. Edward S. Herman, and Noam Chomsky, (2002) *Manufacturing Consent: The Political Economy of the Mass Media*, Pantheon Books, New York.

2. Seator, Jean. (1998). Politics and the Media, Blackwell.

- 3. Gunther, Richard. (2000). Democracy and the Media, Cambridge
- 4. Harold Laswell; The Theory of Political Propaganda
- 5. Craig Calhoun: The Modern discourse of identity.
- 6. Abir Chattopadhyay: Communication, Media and Cultural Studies; Progressive Publishers.

Semester – 6

JORA-CC-6-13-TH: Advertising

Marks=50 (4 Credits)

Total Classes: TH: 4hrs Per Week

Unit-1

Advertisement as a medium of communication: Contemporary experiences; historical overview of advertising, socio-economic and cultural impact; Advertising theories: AIDA model, DAGMAR, Maslow's hierarchy model; advertising in mass media: media positioning, planning and scheduling.

Unit-2

Advertising research; advertising campaigning strategy (CPT analysis); Sales and marketing: SWOT(C) analysis, marketing and sales promotion, Unique Selling Proposition, consumer behaviour; Target Audience; brand positioning; Surrogate Advertising: Surrogacy vs. Sabotage; Ethics and Law: Advertising ethics and Laws, Cultural codes; Online Advertising.

Unit-3

Ad Agency: research and planning including media planning, work procedure, agency-client relationship; Regulatory Boards, Case studies.

JORA-CC-6-13-P: Advertising

Marks=30 (2 Credits)

Total Classes: 4hrs. Per Week

Unit-4 (Practical)

Types of advertisement: Classified-display, Local-regional-national-international Ad, consumercorporate ad, industrial-trade-retail Ad, government-private, outdoor, surrogate, radio-TVinternet-mobile; Advertisement copy and lay-out: Headline, Illustration, Subhead-Text, Slogan, Logo, Storyboard making; Thumbnail-Rough-Final lay-out, Television Commercials.

Readings:

- (1) SwetaVerma and AmitArora: Advertising and Sales Management; Black Prints.
- (2) Frank Jefkins: Advertising Made Simple; Madesimple Books.
- (3) James S. Norris: Advertising; Reston Pub. Co.
- (4) Gillian Dyor: Creative Advertising: Theory and Practice;
- (5) AlokBajpaye: Advertising Management;
- (6) SarojitDutta: Advertising Today: The Indian Context;Kolkata Profile Publishers
- (7) David Ogilvy, Ogilvy on Advertising, Pan/Prion Books
- (8) Frank Jefkins, Advertising Made Simple, Rupa& Co.
- (9) Chunawalla, Advertising Theory And Practice, Himalaya Publishing House
- (10) JethwaneyJaishri, Advertising, Phoenix Publishing House.

JORA-CC-6-14-TH+TU: Public Relations

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

PR-Definitions, historical overview of the discipline, PR as Management function, Image Management; Public Relations versus Advertisement; Non-PR issues: Publicity, Propaganda, Public Opinion and Marketing; Publics: Definition, types; Integrated Marketing Communication.

Unit-2

PR Theories and principles: Research, planning, implementation and evaluation; James Grunig's Four PR models: Publicity model, Public Information model, Two-way asymmetrical model, Two-way symmetrical model; Strategic Communication; PRO: Role, Qualities and Functions.

Unit-3

Tools of PR: Press Release, Annual Report, House Journal, Press Conference and Press Tour, Corporate Film; Relationship Management: Media Relations, Community Relations and CSR, Internal or Employee Relations.

Unit-4

Financial PR; Crisis PR: Issue-emergency-crisis, Crisis PR strategies; PR Agency: New Trends, In-house PR vs Agency, Client Agency relationship.

Readings:

(1) K.R. Balan: Corporate Public Relations; Himalaya Publishing.

- (2) Frank Jefkins: Public Relations Made Simple; Heinemann; London.
- (3) Philip Lesly: Handbook of Public Relations and Communications; McGraw-Hill; 5th edition
- (4) Anne Gregory: Public Relations; IPR Publications.
- (5) SubirGhosh: Public Relations Today; Rupa& Co.
- (6) Samar Ghosh: Jana Sanjog; PaschimbangaRajyoPustakParshad.
- (7) Kaul J.M., NoyaPrakash, Public Relation in India, Calcutta.
- (8) Cutlip S.M and Center A.H., Effective Public Relations, Prentice Hall.
- (9) Dennis L. Wilcose& Glen T, Public Relations, Pearson.
- (10)Jefkins Frank: Public Relation Techniques, Heinmann Ltd.

For Semester-5 (Any One)

JORA-DSE-B-5: Discipline Specific Elective

JORA-DSE-B-5-1-TH+TU: Multimedia Journalism

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit 1

Introduction to Multimedia; Multimedia and interactivity, Basics of multimedia reporting, importance of audio, photo andvideo production skills in the newsroom in contemporary times, brainstorming about story, ideas, legal and ethical issues and diversity in themedia - media law, ethics, multicultural sensitivity.

Unit-2

Print:Multi-platform Communications; Leads and Nut Graphs, News Writingfor Web, Content Development, Sources and Online Research, Story Organization, Strategies for effective interviewing and notetaking, Interviewing Techniques.

Unit-3

Audio & Video Content:Focus on audio recording, telling stories with sources and natural sound, bytes, editing & Placement of sound, Storytelling with video, broadcasting/ webcasting: Collecting content,Structuring story andwriting.

Unit-4

Mobile journalism:Screen sizes & responsive web, Information multimedia and web architecture, corporate websites, web feature stories, key points for web interactive narrative, interactive usersvs. linear narratives, Interactive writer.

Readings:

(1) Korolenko, Michael. Writing for Multimedia: A Guide and Source Book for the Digital Writer. Pearson. 2005.

(2) Savage, Terry Michael, and Karla E. Vogel. An Introduction to Digital Multimedia.Jones& Bartlett Publishers, 2013.

(3) Christin, Anne-Marie, ed. A History of Writing: From Hieroglyph to Multimedia.

Flammarion-Pere Castor, 2002.

(4) Garrand, Timothy. Writing for Multimedia and the Web: A Practical Guide to Content Development for Interactive Media.CRC Press, 2006.

For Semester-5

JORA-DSE-B-5-2-TH+TU: Communication Research

Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Introduction to Research: Definition, Role, Function, Basic and Applied Research, Scientific Approach, Role of theory, in research, Steps of Research (Research question, Hypothesis, Review of Literature).

Unit-2

Methods of Media Research: Qualitative-quantitative components, Content Analysis, Exploratory research: Qual-Quan (Mixed) method, Narrative Analysis, Historical Research, Semiotic Research Methods; Chi-Square Test, T-Test, Likert Scale.

Unit-3

Sampling: Need for Sampling, Sampling Methods, Representativeness of the Samples, Sampling Error, Tools of data collection: Primary and Secondary data-Questionnaire, Focus Groups, Telephone, Surveys, Online Polls, Published work.

Unit-4

Data Analysis Techniques; Coding and Tabulation, Non-Statistical Methods (Descriptive and Historical), Bibliography Writing the research report, Ethnographies and other Methods, Readership and Audience Surveys; Ethnographies, textual analysis, discourse analysis Ethical perspectives of mass media research

Readings:

(1) Wimmer, Roger, D and Dominick, Joseph, R. Mass Media Research, Thomson Wadsworth, 2006, pgs1-60; 65-81;83-98.

(2) Kothari, C.R. Research Methodology: Methods and Techniques, New Age International Ltd. Publishers, 2004, pgs1-55; pgs95-120.

(3) Arthur Asa Berger. Media Research Techniques, Sage Publications, 1998.

(4) John Fiske. Introduction to Communication Studies, Routledge Publications, 1982.

(5) David Croteau and William Hoynes. Media/Society: Industries, Images and Audiences, Forge Press (For Case Studies) Amazon, 2002.

For Semester-6 (Any One)

JORA-DSE-B-6-3-TH+TU: Folk and Community Media Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Culture and Tradition-Meaning of Culture, Tradition, Oral tradition; Dominant Culture versus Subaltern Culture.

Unit-2

Impact of Five Year Plans in fulfillment of rural development; NGO communication: Extension of rural objectives; Role of Rural Newspapers and Periodicals in contrast to District Pages of corporate newspaper houses.

Unit-3

Community and Folk Media in West Bengal; Definition and characteristics of community; Traditional Folk Media (TFM) - Concept and Forms – meaning, characteristics; Difference from Mass Media;

Unit-4

Various forms of Folk Media in India: Tamasha, Keertana, Yakshagana, Nautanki, Jatra, Bhavai, Ramlila and Raslila; Important Folk forms of Bengal: Gambhira, Kabigaan, Chhou, Raibneshe, Alkap, Kabigaan, Yatra, Leto, Baul.

Readings:

(1) ShyamParmar: Traditional Folk Media in India, Routledge, 1994.

- (2) Wakil Ahmed: BanglarLokSanskriti, GatidharaPrakashoni, Bangladesh.
- (3) Wakil Ahmed: Lok Kala Tatwo O Matabad, Boipatro, Bangladesh.
- (4) Ashutosh Bhattacharya: LokSahityerItihash,
- (5) Folk and Tribal Cultural Centre(ed): BongiyoShilpoParichay.

For Semester-6

JORA-DSE-B-6-4-TH+TU: Health & Science Communication Marks=100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Characteristics of Health Communication; Barriers to Effective Health Communication; Strategies to improve health communication; Understanding culture to promote health communication; Health and Media: Changing health behaviour;

Unit-2

Health care system in India; Introduction to Epidemiology for Health Communicators; Effective interpersonal communication between health care provider and client; Impediment to a Sound Provider-Patient Relationship; Community Involvement in Health communication; Engaging patients in healthcare; Health literacy;

Unit-3

Contemporary Health Care Marketing; Interactive Marketing Communications; Advanced Writing for Health Communicators; Research Methods for Health Communicators; Social Media Strategies and Tactics for Health Communicators; Writing about medicine; mobile health design.

Unit-4

Media and science journalism; Science as an essential element in political, corporate and community news; major issues in science journalism; essential features of science reporters; role of a science page editor; popular science magazines - scope of science journalism on radio & television in developing countries; science based serials on radio and television; science journalism for the digital media

Readings:

(1) Richard K. Thomas: Health Communication, Springer.

(2) Renato Schiavo: Health Communication: From Theory to Practice 2nd Edition

(3) Nancy Grant Harrington (Ed.): Health Communication: Theory, Method, and Application 1st Edition.

(4) Elise Hancock: Ideas into Words: Mastering the Craft of Science Writing, Baltimore and London: Johns Hopkins, 2003.

- (5) N Corcoran (Ed.): Communicating health: strategies for health promotion; Sage.
- (6) O.P. Jaggi: A Concise History of Science including Science in India.
- (7) R. Sundara, Popular Science in Mass Media.

University of Calcutta B.A. (General) Journalism and Mass Communication Three Year Degree Course Under Choice Based Credit System (CBCS)

Course Type	Total Papers	Credits [Theory +	- Tutorial]& [Theo	ry + Practical]
Core Courses	14	14X5=70	14X4=56	84
		14X1=14	14X2=28	
Discipline	4	4X5=20	Same	24
Specific Course		4X1=4		
Generic	4	4X6=24	Same	24
Electives				
AECC	2	2X2=4	Same	4
SEC	2	2X2=4	same	4
Totals	26			140

Semester	Name of the Courses	Course	Credit	Full Marks
		Турс		
Semester-1	JORG-CC/GE-1-1-TH+TU	CC1 / GE1	6	100
	Basics of Journalism			
			Total=20	400
Semester-2	JORG-CC/GE-2-2-TH+TU	CC2 / GE2	6	100
	Media Management			
			Total=20	400
Semester-3	JORG-CC/GE-3-3-TH Advertising/Public Relations (4 Credits); JORG-CC/GE-3-3-P Advertising/Public Relations (2 Credits)	CC3 / GE3	6	100

			Total-20	400
	JORG-SEC-A-3/5-1 Journalistic Writings; JORG-SEC-A-3/5-2 Newspaper designing JORG-SEC-A-3/5-3 Film Appreciation (on 5 films) JORG-SEC-A-3/5-4 Print Advertising	JORG- SEC-A-3/5	2	50
Candidate has to	opt ONE either in Semester-3 o	or in Semester	-5 from SE	C-A
			Total=20	400
Semester-4	JORG-CC/GE-4-4-TH+TU Press Laws and Indian Constitution	CC4 / GE4	6	100
	JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2 Radio, Television Script Writing JORG-SEC-B-4/6-3 Anchoring; JORG-SEC-B-4/6-4 Media Presentation;	JORG- SEC-4/6	2	50
Candidate has to	opt ONE either in Semester-4 o	or in Semester	-6 from SE	C-B
			Total=20	400
Semester-5	JORG-DSE-A-5-TH+TU	JORG-	6	100

	Film Studies	DSE-A-5		
	OR			
	JORG-DSE-A-5-2-TH+TU:			
	Specialized Writings			
		IODC	2	50
	JUKG-SEC-A-3/5-1	JUKG-	2	50
	Journalistic Writings;	SEC-A-2		
	JORG-SEC-A-3/5-2			
	Newspaper designing			
	JORG-SEC-A-3/5-3			
	Film Appreciation (on 5			
	films)			
	JORG-SEC-A-3/5-4			
	Print Advertising			
Candidate has to	opt ONE either in Semester-3 (or in Semester	r-5 from SE	C-A
	- T			
	l .	I	1	1
			Total=20	400
Semester-6	JORG-DSE-B-6-TH+TU	JORG-	Total=20	400
Semester-6	JORG-DSE-B-6-TH+TU	JORG- DSE-B	Total=20	400 100
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media	JORG- DSE-B	Total=20	400 100
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR	JORG- DSE-B	Total=20	400 100
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU:	JORG- DSE-B	Total=20	400
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations	JORG- DSE-B	Total=20	400
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations	JORG- DSE-B	Total=20	400
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1	JORG- DSE-B JORG-	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2 Radio, Television Script	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2 Radio, Television Script Writing	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2 Radio, Television Script Writing JORG-SEC-B-4/6-3	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2 Radio, Television Script Writing JORG-SEC-B-4/6-3 Anchoring;	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50
Semester-6	JORG-DSE-B-6-TH+TU Broadcasting Media OR JORG-DSE-B-6-2-TH/TU: International Relations JORG-SEC-B-4/6-1 Documentary Script Writing JORG-SEC-B-4/6-2 Radio, Television Script Writing JORG-SEC-B-4/6-3 Anchoring;	JORG- DSE-B JORG- SEC-B-2	Total=20 6 2	400 100 50

	Presentation;				
Candidate has to opt ONE either in Semester-4 or in Semester-6 from SEC-B					
			Total=20	400	

Division of Marks (Out of 100)

	Programme	Credit Hours
Attendance	10	
Internal	10	
Assessment		
Exam. (100)	15 for 1 Credit	1hr. per week
	65 for 5 Credits	5hrs. per week
1 Credit for	Term Paper,	University
each course	Seminar,	Programme
	Assignments	
	etc.	
5 Credits	University	University
	Question	Programme
For Practical	30 for 2 credits	4hrs. per week
based papers:	50 for 4 credits	4hrs. per week
Exam. (100)	Univ. Prog.	

- 65 Marks for theoretical segments; 15 marks for Tutorial segments (CC1, CC2, CC4);
- 50 marks for theoretical segments; 30 marks for Practical segments (For CC3);
- Upto 1000 words for one term paper/upto 500 words for each of the two Term Papers / equivalent to Book Review / equivalent to comprehension. Report presentation / Poster presentation / Field work based on syllabus-related and/or current topics (may be done in groups) [The modes / themes and/or topics are to be decided by the concerned faculty of respective colleges.
- Laboratory Requirements for Journalism (Hons. + Gen.):

(a) All Laboratories should be Airconditioned;

(b) One Computer Teacher, having suitable experience in computer operation, film making/editing, to be appointed from professional field;

- (c) Laboratory Attendant to be appointed;
- (d) Sound-proof studio (optional);
- (e) Recording System (Audio & Video);
- (f) Hi-speed Internet connection;
(g) Necessary Software to be installed: Page-making Software; Photo Editing Software; Video Editing Software; Audio Editing Software; Bangla Software (Unicode).

• The Pedagogy

The teaching-learning of the programme would be organized through lectures, tutorials, practicals, projects, presentations, workshops, seminars and hands-on training. Practical sessions are incorporated as an important component in most of the papers, with hands-on training in the use of various equipment, such as Cameras, Editing Machines etc.

Course Details

Semester-I

JORG-CC/GE-1-1-TH+TU: Basics of Journalism

100 Marks (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Newspaper and socio-economic and cultural development in India; News: Definition; Elements of news; News Sources; Different types of new; The Editor: functions and responsibilities; Editorial freedom; Role of theeditor; News Editor: duties and responsibilities; Chief Sub-Editor; Sub-Editors: duties and qualities.

Unit-2

Duties and Responsibilities of Reporter, Chief Reporter; Foreign Correspondent; Special Correspondent, Bureau Chief, District Correspondent; Structure of news: inverted pyramid; Intro; Lead; Language of news writing; Objectivity; Feature: Definition, Types; Editorial: Importance, Choice of subjects, Arrangement, Style of presentation.

Unit-3

Editing: Principles of Editing; Copy Testing; Computer Editing; Differenttypes of Headlines; Computer applications;Page Make-up; Front page and other pages; Principles to be followed; Photo journalism: Definition, Importance; Duties, responsibilities of a news photographer; Caption writing; Photo printingprocess.

Unit-4

Column and Columnist; Importance of column; Letters to the Editor; Importance; Proof reading; Symbols of proof reading; Duties and responsibilities of proof readers; The News Agencies: functions; Styles of Agency reporting; Various international News Agencies; Political reporting, Financial reporting, Sports reporting.

Readings:

(1) K. M. Srivastava: News Reporting and Editing;Sterling Publishers Pvt Ltd (2003).

(2)M.V. Kamath: Professional Journalism; Vikas Publishing, New Delhi.

(3) Sourin Banerjee: Reporting and Editing Manual;

(4) VirBalaAgarwal&V.S.Gupta: Handbook of Journalism & Mass Communication; Concept Publisher Delhi.

(5) Baidyanath Bhattacharya: AdhunikGanamadhyam;

 $(6)\ Sanbad Bidya-Parthya Chattopadhyay-Paschimbanga Rajya Pustak Parshad.$

Semester-II

JORG-CC/GE-2-2-TH+TU: Media Management

100 Marks (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Newspaper as a business enterprise and its public service role; Indian experience; Ownership of Newspapers: Different types in India; Cross-media Ownership, Media Conglomeration& Convergence; Sources of revenue of newspapers; Scope in India; Departments of Newspaper organizations and functions; Front page of a daily newspaper; Film review; Book review; Music review; Radio and Television review.

Unit-2

Circulation of newspapers; Circulation factors: Geographical factor, Social Factor, Economic, Technological factor; Promoting circulation; Newspaper'spolicy; Circulation department; Organization; Functions; Duties and responsibilities of the circulation manager; RNI; Audit Bureau of Circulation (ABC), National Readership Survey (NRS);

Unit-3

Advertisement department of a Newspaper; Administration of Ad-department; Advertisement Manager: Duties and responsibilities; Different types of advertisement in newspapers: classified and display; Newspaper as a medium of advertisement;

Unit-4

Newspaper Printing: Evolution of newspaper printing process; Public Service Broadcasting: PrasarBharati; Electronic Media Management: Licensing, Organizational Patterns; TRAI; The Broadcasting Bill 1997.

Readings:

(1) Gulab Kothari: Newspaper Management in India; Rajasthan PatrikaPvt Ltd.

(2) VanitaKohli: The Indian Media Business, Response Books.

(3) K.P Yadav: Media Management; Adhyayan Publishers & Distributors.

(4) Sanbadpatra Sangathan o Parichalana- Pabitra Mukhopadhyay- Paschimbanga Rajya Pustak Parshad.

Semester-III

JORG-CC/GE-3-3-TH: Advertising and Public Relations Marks=50 (4 Credits)

Total Classes: 4hrs Per Week

Unit-1

Advertising: Definition; Different types; Classified and display; Advertisement medium; different types; relative advantages; Selection criteria; Ethics ofAdvertising; Market research; Brand positioning; Creative strategy; Market and its segmentation; Sales promotion;

Unit-2

Advertising agency: structure, functions, important functionaries; Client-Agencyrelationship; Copy writing; Types of Copy; How to prepare; Principles of writing; Main features; Copy writer: qualities, duties and responsibilities.

Unit-3

Public Relations: Definition; PR as a management function; Publics in PR; Importance of PR; PRO: Qualities and Duties; PR in Public Sector; PR for Private Sector; PR Tools; Press Release; Press Conference; Press Rejoinder; Community Relations, Media Relations; Corporate PR; House Journal; PR Institutions: PRSI, IPR; Crisis PR; Corporate Social Responsibility (CSR)

JORG-CC/GE-3-3-P: Journalism

Marks=30 (2 Credits)

Total Classes: 4hrs Per Week

Unit-4

Basic knowledge of Computer for print journalism; Writing a News Report in about 150 words from given points; Writing Headlines from News Stories; Writing Headline, Intro; Writing Anchor Story; Writing article; Creating a display advertisement on Photo Editing Software.

Readings:

- (1) AlokBajpaye: Advertising Management;
- (2) SarojitDutta: Advertising Today: The Indian Context; Kolkata Profile Publishers;
- (3) K.R. Balan: Corporate Public Relations; Himalaya Publishing.
- (4) Frank Jefkins: Public Relations Made Simple; Heinemann; London.

Skill Enhancement Course-A-3/5

JORG-SEC-A-3/5 (any one): Skill Enhancement Course 2 Credits

Candidate has to opt ONE either in Semester-3 or in Semester-5 from SEC-A

JORG-SEC-A-3/5-1: **Journalistic Writings**: Writing News (Hard News, Soft News, Anchor News) Feature (News Feature), Editorial.

JORG-SEC-A-3/5-2: Newspaper Designing: Front Page, International Page, Business Page, Sports Page of a Newspaper through Page-making Software.

JORG-SEC-A-3/5-3: **Film Appreciation**: Analytical appreciation on 5 films (above mentioned);

JORG-SEC-A-3/5-4: **Print Advertising**: Making a display advertisement using suitable photo editing software; Candidates have to identify all elements of the advertisement copy.

Semester-IV

JORG-CC/GE-4-4-TH+TU: Press Laws and Indian Constitution 100 Marks (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Indian Constitution; Main features; Fundamental Rights; President of India: Power and position; Prime Minister: power and position; Chief Minister: Power and position; Governor: Power and position; Parliament; Supreme Court; and High Court; Local governments;

Unit-2

Indian Foreign Policy; National Economic policy; New Industrial policy; Finance Commission and its functions; Five Year Plans: Objectives and Achievements; NitiAyog.

Unit-3

Press Laws: Defamation, Contempt of Court; Parliamentary Privileges Act; Article 19(1)A and freedom of press; Copyright Act; Official Secrets Act; WorkingJournalists' Act;

Unit-4

Journalistic Ethics; Freedom and responsibility of the press; Press Commission and Press Council of India: Constitution, objectives and guidelines; Media Council of India.

Readings:

(1) Bansi Manna: Press Laws in India; Academic Publisher.

(2) Bansi Manna: Bharater Press Aain; Academic Publisher.

(3) Debanjan Banerjee: Justice and Journalist; S.B. Enterprise

Skilled Enhancement Course-B-4/6

JORG-SEC-B-4/6-1: Skilled Enhancement Course 2 Credits

Candidate has to opt ONE either in Semester-4 or in Semester-6 from SEC-B

JORG-SEC-B-4/6-1: **Documentary Script Writing**: Micro project of 1000 words on any social, political, cultural topic;

JORG-SEC-B-4/6-2: **Radio-Television Script Writing**: Writing Scripts for Radio and Television News and Talk Shows;

JORG-SEC-B-4/6-3: Anchoring: 3 minutes Programme Anchoring on topics of interest.

JORG-SEC-B-4/6-4: Media Presentation: PPT on any social or corporate planning (5 Slides).

Semester-V

JORG-DSE-A-5: Discipline Specific Course (any one)

JORG-DSE-A-5-1-TH+TU: Film Studies

100 Marks (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Film as a medium of mass communication; Early Indian Cinema, Adaptation of literature in cinema, Concepts of Avant GardeCinemaand Underground Cinema; Brief history of Documentary Cinema in India.

Unit-2

Film Movements: French New Wave, Italian Neo-realism; Post-independence popular Bombay films, Growth of regional cinema in India; Contemporary Indian film genres: Masala Films, Underworld films, Art or Parallel cinema.

Unit-3

Contributions of Eminent Filmmakers: Sergei Eisenstein, Akira Kurosawa, Charles Chaplin, Satyajit Ray, MrinalSen, RitwikGhatak. Landmarks of Indian Cinema: PatherPanchali, GupiGyneBaghaByne, Meghe Dhaka Tara, Subarnarekha, AkalerSandhane,Guide, Sholey, Jane Bhi Do Yaaro, Albert Pinto Ko Gussa Kiyun Ata Hain, Dahan, Chitrangada.

Unit-4

Stages of Film Production: Pre-production, production, and post-production methods; Basic camera use in films; Principles of film editing: Aesthetic, technical; Use of Software in Film editing; Film marketing.

Readings:

- (1) Satyajit Ray: Our Films Their Films;
- (2) KiranmoyRaha: Bengali Cinema;
- (3) ParthaRaha: Cinema r Itibritwo; Dey's Publisher.
- (4) Jill Nelmes: An Introduction to Film Studies; Psychology Press.

OR

JORG-DSE-A-5-2-TH+TU: Specialized Writings

Marks= 100 (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Writing on various social issues: fashion, music and art, education, employment opportunities; health, environment, crime, legal;

Unit-2

Press Conference and Interview; Techniques, stages of preparing an Interview; Different types of interview; Assignments on Interviewing;

Unit-3

Women and mass media; Women's page; Women's magazines: Scope in India; Assignments.

Unit-4

Ad-Copy for electronic media and print media; Storyboard writing; Writing Press Release.

JORG-SEC-A-3/5 (any one): Skill Enhancement Course

2 Credits

Candidate has to opt ONE either in Semester-3 or in Semester-5 from SEC-A

JORG-SEC-A-3/5-1: **Journalistic Writings**: Writing News (Hard News, Soft News, Anchor News) Feature (News Feature), Editorial.

JORG-SEC-A-3/5-2: Newspaper Designing: Front Page, International Page, Business Page, Sports Page of a Newspaper through Page-making Software.

JORG-SEC-A-3/5-3: **Film Appreciation**: Analytical appreciation on 5 films (above mentioned);

JORG-SEC-A-3/5-4: **Print Advertising**: Making a display advertisement using suitable photo editing software; Candidates have to identify all elements of the advertisement copy.

Semester-VI

JORG-DSE-B-6 (any one)

JORG-DSE-B-6-1-TH+TU: Broadcasting Media

100 Marks (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit-1

Radio: Development of Radio broadcasting in India; Radio and society; Radio News: Elements of radio news; Differences in reportingand presentation between Radio and Television;

Unit-2

FM Radio, Radio Jockey, Programme patterns of AIR, Radio Drama, Community Radio; Autonomy of Indian broadcasting; Impact of TV on Print media.

Unit-3

Television in India: Doordarshan; Satellite TV channels: BBC, CNN, NDTV, STAR Channels; TV as news medium and entertainment medium;Differences in news reporting and presentation between Radio &TV;Balanced Presentation and Objectivity; Basic camera movements.

Unit-4

Television and national development; Television Soap Opera, Reality Shows, Impact of Television on Children, Women (assignments); Television Cartoon: Entertainment and Reality; Live Telecast for various TV programmes; Educational TV.

Readings:

- (1) K.M. Srivastava: Radio and Television; Sterling Publishers.
- (2) Sisir Bhattacharya: Television Sambadikata;
- (3) M.V. Kamath: Professional Journalism; Vikas Publishing, New Delhi.
- (4) Radio Sanbadikata- Kaushik Bhattacharya- ParulPrakasani.

OR

JORG-DSE-B-6-2-TH/TU: International Relations

100 Marks (6 Credits)

Total Classes: TH: 5hrs + TU1hr. Per Week

Unit 1

Basic concepts in International Relations: Foreign policy and diplomacy, Non-alignment movement; Indian Foreign Policies; Indo-Pak, Indo-Bangladesh relations.

Unit 2

United Nations: Formation, Charter and Objectives; UN and Millennium Development Goals; Indo-US relations; SAARC, ASEAN.

Unit 3

UN Security Council: Concept of security- traditional and non-traditional, Disarmament and arms control; Sino-Indian relations;

Unit 4

Global Media Economy: Colonialism and Neoliberalism, IMF, World Bank, WTO.

Readings:

(1) PranabChattopadhya: AntorjatikSomporkerRuprekha; New Central Book Agency.

(2) Shakti SadhanMukhopadhyay: AntorjatikSamparka; Progressive Publisher.

(3) James Lee Ray & Juliet Kaarbo: Global Politics; Houghton Misslin Company.

Skilled Enhancement Course-B-4/6

JORG-SEC-B-4/6-1: Skilled Enhancement Course 2 Credits

Candidate has to opt ONE either in Semester-4 or in Semester-6 from SEC-B

JORG-SEC-B-4/6-1: Documentary Script Writing: Micro project of 1000 words on any social, political, cultural topic;

JORG-SEC-B-4/6-2: **Radio-Television Script Writing**: Writing Scripts for Radio and Television News and Talk Shows;

JORG-SEC-B-4/6-3: Anchoring: 3 minutes Programme Anchoring on topics of interest.

JORG-SEC-B-4/6-4: Media Presentation: PPT on any social or corporate planning (5 Slides).



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12/18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

SI.	Subject	<u>SI.</u>	<u>Subject</u>
110.		<u>1::0.</u>	
1	Anthropology (Honours / General)	29	Mathematics (Honours / General)
2	Arabic (Honours / General)	30	Microbiology (Honours / General)
3	Persian (Honours / General)	31	Mol. Biology (General)
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)
5	Bio-Chemistry (Honours / General)	33	Physical Education (General)
6	Botany (Honours / General)	34	Physics (Honours / General)
7	Chemistry (Honours / General)	35	Physiology (Honours / General)
8	Computer Science (Honours / General)	36	Political Science (Honours / General)
9	Defence Studies (General)	37	Psychology (Honours / General)
* 10	Economics (Honours / General)	38	Sanskrit (Honours / General)
11	Education (Honours / General)	39	Social Science (General)
12	Electronics (Honours / General)	40	Sociology (Honours / General)
13	English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)
15	Environmental Studies (AECC2)	43	Women Studies (General)
16	Film Studies (General)	44	Zoology (Honours / General)
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries - IFFV (Major)
18	French (General)	46	Sericulture - SRTV (Major)
19	Geography (Honours / General)	47	Computer Applications - CMAV (Major)
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)
21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales
.22	History (Honours / Canaral)	. 50	Communicative English CMEV (Major)
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Distetios CNDV
25	islame misiely culture (nonours / General)	51	(Major)
24	Home Science Extension Education	52	Bachelor of Business Administration (BBA)
	(General)		(Honours)
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design -
			(B.F.A.D.) (Honours)
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)
27	Human Rights (General)	55	B. Music (Honours / General) and Music
			(General)
28	Journalism and Mass Communication (Honours / General)	0000000	· · · · · · · · · · · · · · · · · · ·

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar

U.G. Syllabus for Physics (Honours & General) University of Calcutta 2018

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1 Scheme of CBCS Curriculum

1.1 Basic Courses Types under CBCS

In CBCS there are some basic types of courses. The ones that are relevant to the B.Sc. curricula have been described below.

- 1. Core Course (CC): A discipline specific compulsory basic course.
- 2. Discipline Specific Elective Course (DSE): A discipline specific elective course which is more advanced or specialized.
- 3. Generic Elective Course (GEC): An *inter-disciplinary elective* course to be opted from a discipline other than ones main discipline(s) of choice (e.g., a course in a discipline other than in which honours has been taken).
- 4. Skill Enhancement Course (SEC): A discipline specific elective skill enhancement course.
- 5. Ability Enhancement Compulsory Course (AECC): These are *compulsory* courses. There are two of them. AECC-1 is Communicative English / Modern Indian Language (e.g.:Bengali, Urdu, Hindi.) & AECC-2 is Environmental Science.

1.2 Credit Structure

In CBCS, all courses have credits assigned to them.

For any course, one of the following three modes teaching will be used:

- 1. Theory + Practical
- 2. Theory + Tutorial
- 3. Theory only

The credit structure is described below:

	Theory -	+ Practical	Theory -	+ Tutorial	Theory	Total Credits
	Theory	Practical	Theory	Tutorial	Theory	
CC	4	2	5	1		6
DSE	4	2	5	1		6
GE	4	2	5	1		6
SEC					2	2
AECC					2	2

Class Assignments The class assignment for different course segments (theory, practical, tutorial) are as follows:

- Theory: 1 credit = 1 hour / week
- Practical: 1 credit = 2 hours / week
- Tutorial: 1 credit = 1 hour / week

Duration of the Semesters The semesters will comprise 15 to 18 weeks of direct teaching.

Grading The evaluation and final grading will also depend crucially on the credits of the papers.

A Grade Point Average system will be used. The weight factor (or importance) with which a particular paper will contribute to the final CGPA (Cumulative Grade Point Average) will depend on the credit of the course.

Please refer to the University Regulations for details.

1.3 Selection of DSE

Honours

- A student must choose four DSE papers from his/her honours subject two papers in the 5th semester and two papers in the 6th semester.
- There are two groups of DSE papers, DSE-A and DSE-B. Each of these groups are further divided into two subgroups DSE-A1, DSE-A2, and DSE-B1, DSE-B2 respectively.
- In the 5th semester a student will be expected to choose one paper from DSE-A1 and one paper from DSE-B1.
- Similarly, in the 6th semester a student will be expected to choose one paper from DSE-A2 and one paper from DSE-B2.

General

- A student must choose six DSE papers.
- For each subject of the student's chosen combination (e.g.: Physics- Chemistry-Mathematics), a student must choose two DSE papers one in the 5th semester and one in the 6th semester.
- For each subject there will be two groups of DSE papers, DSE-A and DSE-B.
- The DSE paper in the 5th semesters must be chosen from DSE-A and the DSE paper in the 6th semester must be chosen from DSE-B.

1.4 Selection of SEC

Honours

- A student must choose two SEC papers from the honours discipline one in the 3rd semester and one in the 4th semester.
- For each subject there will be two groups of SEC papers, SEC-A and SEC-B.
- The SEC paper in the 3rd semester must be chosen from Group A and the SEC paper in the 4th semester must be chosen from Group B.

General

- A student must choose four SEC papers one each in the 3rd, 4th, 5th and 6th semesters.
- The four SEC papers must be chosen from two of the subjects in his/her chosen combination (e.g.: Physics, Chemistry, Mathematics).
- Two of the papers must be chosen from one subject and two from the other.
- For each subject there will be two groups of SEC papers, SEC-A and SEC-B.
- The SEC papers in the 3rd and 5th semesters must be chosen from Group-A of two subjects.
- The SEC papers in the 4th and 6th semesters must be chosen from Group-B of the same subjects as above.

1.5 B.Sc. Honours - Semesterwise Courses

The number of different types of courses to be taken in the different semesters have been specified in the table below.

	Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6	Total	Credits
CC	2	2	3	3	2	2	14	$14 \times 6 = 84$
DSE					2	2	4	$4 \times 6 = 24$
GE	1	1	1	1			4	$4 \times 6 = 24$
SEC			1	1			2	$2 \times 2 = 4$
AECC	1	1					2	$2 \times 2 = 4$
Total	4	4	5	5	4	4	26	140

Note:

- 1. The CC for general course of a subject other than the honours subject is to be treated as GE course.
- 2. The four GE courses must be chosen from two interdisciplinary subjects other than Physics, taking at least one from the Science / Home Science Division (Please see University Regulation). However, any discipline may be chosen in any semester.

Special Note:

Across all courses (for both, Honours and General) 10 marks will be reserved for Internal Assessment and 10 marks will be reserved for Attendance.

1.6 B.Sc. Honours - Course Details

Core Courses (Honours)

Sem	Course Type	Course Name	Teaching Mode	Credit	Marks
	CC	Mathematical Dhysics	Theory	4	50
1		Mathematical Physics - 1	Practical	2	30
1	CC	Maghanias	Theory	4	50
		Mechanics	Practical	2	30
	CC	Electricity and Magnetism	Theory	4	50
2		Electricity and Magnetism	Practical	2	30
2	CC	Wayes and Optics	Theory	4	50
	00	waves and Optics	Practical	2	30
	CC	Mathematical Physics II	Theory	4	50
		Mathematical Physics - 11	Practical	2	30
3	CC	Thermal Physics	Theory	4	50
5			Practical	2	30
	CC	Digital Systems and Applications	Theory	4	50
			Practical	2	30
	CC	Mathematical Physics - III	Theory	4	50
			Practical	2	30
4	CC	Floments of Modern Physics	Theory	4	50
T	00	Elements of wodern r hysics	Practical	2	30
	CC	Analog Systems and Applications	Theory	4	50
		Thatog systems and Tippleations	Practical	2	30
	CC	Quantum Mechanics and Applications	Theory	4	50
5	00	Quantum Mechanics and Applications	Practical	2	30
0	CC	Solid State Physics	Theory	4	50
	00	Jond State 1 Hysics	Practical	2	30
	CC	Electro-magnetic Theory	Theory	4	50
6		Electro-magnetic Theory	Practical	2	30
	CC	CC Statistical Mechanics	Theory	4	50
			Practical	2	30

Choices for DSE (Honours)

Sem	Course Type -	Course Name	Teaching Mode	Credit	Marks
	Group				
		Advanced Mathematical Matheda	Theory	5	65
	DSE-A1	Advanced Mathematical Methods - 1	Tutorial	1	15
	(Any one)	Communication Floctronics	Theory	4	50
5		Communication Electronics	Practical	2	30
		Advanced Mathematical Methods II	Theory	5	65
	DSE-B1 (Any one)	Advanced Mathematical Methods - 11	Tutorial	1	15
		Nuclear and Particle Physics	Theory	5	65
		ivuciear and i article i hysics	Tutorial	1	15
		Astronomy and Astrophysics	Theory	5	65
	DSE-A2	Astronomy and Astrophysics	Tutorial	1	15
	(Any one)	Advanced Dynamics	Theory	4	50
6		Advanced Dynamics	Practical	2	30
		Conoral Bolativity	Theory	5	65
	DSE-B2	General Relativity	Tutorial	1	15
	(Any one)	Nano Materials and Applications	Theory	5	65
		Wano Waterials and Applications	Tutorial	1	15

Choices for SEC (Honours)

Sem	Course Type -	Course Name	Teaching Mode	Credit	Marks
	Group				
3	SEC-A	Basics of Programming and Scientific Word Processing	Theory	2	80
	(Any one)	Electrical Circuits and Network Skills	Theory	2	80
4	SEC-B	Computer Algebra System and Figure Drawing Skill	Theory	2	80
	(Any one)	Renewable Energy and Energy Harvesting	Theory	2	80

1.7 B.Sc. General - Semesterwise Courses

The number of different types of courses to be taken in the different semesters have been specified in the table below.

	Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6	Total	Credits
CC	3	3	3	3			12	$12 \times 6 = 72$
DSE					3	3	6	$6 \times 6 = 36$
GE								
SEC			1	1	1	1	4	$2 \times 4 = 8$
AECC	1	1					2	$2 \times 2 = 4$
Total	4	4	4	4	4	4	24	120

Note:

- 1. The CC must be chosen from three different disciplines.
- 2. The four SEC must be chosen from two different disciplines.

1.8 B.Sc. General - Course Details

Core Courses (General)

Sem	Course Type	Course Name	Teaching Mode	$\operatorname{Credits}$	Marks
1	CC	Mochanics	Theory	4	50
	00	Mechanics	Practical	2	30
0	CC	Electricites en l Me metions	Theory	4	50
	00	Electricity and Magnetism	Practical	2	30
2	CC	Theymal Physics	Theory	4	50
J		I nei mai r nysics	Practical	2	30
4	CC			4	50
4		waves and Optics	Practical	2	30

Choices for DSE (General)

Sem	Course Type -	Course Name	Teaching Mode	Credit	Marks
	Group				
5		Electronics and Instrumentation	Theory	4	50
	DSE-A (Any one)	Electronics and instrumentation	Practical	2	30
		ny one) Modorn Dhysics		5	65
		Modern r nysics	Tutorial	1	15
		Solid State Dhysics	Theory	4	50
6	DSE-B	DSE-B Solid State Physics		2	30
	(Any one)	(Any one)		5	65
Type - Group Electronics and Instrumentation 5 DSE-A (Any one) Electronics and Instrumentation 6 DSE-B (Any one) Solid State Physics 10 Nuclear and Particle Physics	Tutorial	1	15		

Choices for SEC (General)

Sem	Course Type - Group	Course Name	Teaching Mode	Credit	Marks
	-			1	
3/5	SEC-A (Any one)	Basics of Programming and Scientific Word Processing	Theory	2	80
		Electrical Circuits and Network Skills	Theory	2	80
4/6	SEC-B	Computer Algebra System and Figure Drawing Skill	Theory	2	80
	(Any one)	Renewable Energy and Energy Harvesting	Theory	2	80

Part I Physics Syllabus : Honours Course

2 Syllabi for Core Courses (Honours)

2.1 Semester - 1: Mathematical Physics - I

Mathematical Physics - I (Theory)

Paper: PHS-A-CC-1-1-TH

Credits: 4

- 1. Calculus
 - (a) Recapitulation: Limits, continuity, average and instantaneous quantities, differentiation. Plotting functions. Intuitive ideas of continuous, differentiable, etc. functions and plotting of curves. Approximation: Taylor and binomial series (statements only).
 - (b) First Order and Second Order Differential equations: First Order Differential Equations and Integrating Factor. Homogeneous Equations with constant coefficients. Wronskian and general solution. Statement of existence and Uniqueness Theorem for Initial Value Problems. Particular Integral.
 - (c) Calculus of functions of more than one variable: Partial derivatives, exact and inexact differentials. Integrating factor, with simple illustration. Constrained Maximization using Lagrange Multipliers.
- 2. Vector Algebra and Vector Calculus
 - (a) Recapitulation of Vector Algebra. Idea of linear independence, completeness, basis and representation of vectors. Properties of vectors under rotations. Scalar product and its invariance under coordinate rotations. Vector product, Scalar triple product and their interpretation in terms of area and volume respectively.
 - (b) Vector Differentiation: Scalar and Vector fields. Directional derivatives and normal derivative. Gradient of a scalar field and its geometrical interpretation. Divergence and curl of a vector field. Del and Laplacian operators. Vector identities.
 - (c) Vector Integration: Ordinary Integrals of Vectors. Multiple integrals, Jacobian. Notion of infinitesimal line, surface and volume elements. Line, surface and volume integrals of Vector fields. Flux of a vector field. Gauss' divergence theorem, Green's and Stokes Theorems and their applications (no rigorous proofs).
- 3. Orthogonal Curvilinear Coordinates
 - (a) Orthogonal Curvilinear Coordinates. Derivation of Gradient, Divergence, Curl and Laplacian in Cartesian, Spherical and Cylindrical Coordinate Systems.

4. Matrices

- (a) Addition and Multiplication of Matrices. Null Matrices. Diagonal, Scalar and Unit Matrices. Transpose of a Matrix. Symmetric and Skew-Symmetric Matrices. Conjugate of a Matrix. Hermitian and Skew- Hermitian Matrices. Singular and Non-Singular matrices. Orthogonal and Unitary Matrices. Trace of a Matrix. Inner Product.
- (b) Eigen-values and Eigenvectors. Cayley- Hamiliton Theorem. Diagonalization of Matrices. Solutions of Coupled Linear Ordinary Differential Equations. Functions of a Matrix.

Reference Books

- Mathematical Methods for Physicists, G.B. Arfken, H.J. Weber, F.E. Harris, 2013, 7th Edn., Elsevier.
- An introduction to ordinary differential equations, E.A. Coddington, 2009, PHI learning
- Differential Equations, George F. Simmons, 2007, McGraw Hill.
- Mathematical Tools for Physics, James Nearing, 2010, Dover Publications.
- Mathematical methods for Scientists and Engineers, D.A. McQuarrie, 2003, Viva Book.
- Advanced Engineering Mathematics, D.G. Zill and W.S. Wright, 5 Ed., 2012, Jones and Bartlett Learning.
- Mathematical Physics, Goswami, 1st edition, Cengage Learning
- Engineering Mathematics, S.Pal and S.C. Bhunia, 2015, Oxford University Press
- Advanced Engineering Mathematics, Erwin Kreyszig, 2008, Wiley India.
- Essential Mathematical Methods, K.F.Riley & M.P.Hobson, 2011, Cambridge Univ. Press
- Mathematical methods in the Physical Sciences, M. L. Boas, 2005, Wiley.

Mathematical Physics - I (Practical)

Paper: PHS-A-CC-1-1-P

Credits: 2

List of Practicals

- 1. Introduction and Overview
 - (a) Computer architecture and organization, memory and Input/output devices.
- 2. Basics of scientific computing
 - (a) Binary and decimal arithmetic, Floating point numbers, algorithms, Sequence, Selection and Repetition, single and double precision arithmetic, underflow & overflow- emphasize the importance of making equations in terms of dimensionless variables, Iterative methods.
- 3. Errors and error Analysis.
 - (a) Truncation and round off errors, Absolute and relative errors, Floating point computations.
- 4. Introduction to plotting graphs with Gnuplot / QtiPlot (or some other GUI based free software like Grace, Origin etc.)
 - (a) Basic 2D graph plotting plotting functions and data files, fitting data using gnuplot's fit function, polar and parametric plots, modi-fying the appearance of graphs, exporting plots.
- 5. Introduction to programming in python:
 - (a) Introduction to programming, constants, variables and data types, dynamical typing, operators and expressions, modules, I/O statements, file handling, iterables, compound statements, indentation in python, the if-elif-else block, for and while loops, nested compound statements.
- 6. Programs
 - (a) Elementary calculations with different type of data e.g., area and volume of regular shapes using formulae. Creation and handling one dimensional array. Sum and average of a list of numbers stored in array, finding the largest and lowest number from a list, swapping two data in a list, sorting of numbers in an array using bubble sort, insertion sort method. Calculation of term value in a series and finding the other terms with a seed (value of particular term) and calculation of different quantities with series. Convergence and accuracy of series. Introduction of three dimensional array. Simple calculations of matrices e.g., addition, subtraction, multiplication.

- (b) Curve fitting, Least square fit, Goodness of fit, standard deviation
 - i. Ohms law to calculate R,
 - ii. Hooke's law to calculate spring constant

Note:

A list of suggestive numerical problems will be circulated from time to time.

Reference Books

- Introduction to Numerical Analysis, S.S. Sastry, 5th Edn. , 2012, PHI Learning Pvt. Ltd.
- Learning with Python-how to think like a computer scientist, J. Elkner, C. Meyer, and A. Downey, 2015, Dreamtech Press.
- Introduction to computation and programming using Python, J. Guttag, 2013, Prentice Hall India.
- Effective Computation in Physics- Field guide to research with Python, A. Scopatz and K.D. Huff, 2015, O'Rielly A first course in Numerical Methods, U.M. Ascher & C. Greif, 2012, PHI Learning.
- Elementary Numerical Analysis, K.E. Atkinson, 3 rd Edn., 2007, Wiley India Edition.
- Numerical Methods for Scientists & Engineers, R.W. Hamming, 1973, Courier Dover Pub.
- An Introduction to computational Physics, T.Pang, 2nd Edn., 2006, Cambridge Univ. Press Computational Physics, Darren Walker, 1st Edn., 2015, Scientific International Pvt. Ltd.

2.2 Semester - 1: Mechanics

Mechanics (Theory)

Paper: PHS-A-CC-1-2-TH

Credits: 4

- 1. Fundamentals of Dynamics
 - (a) Review of Newtons Laws: Mechanistic view of the Universe. Concepts of Inertial frames, force and mass. Solution of the equations of motion (E.O.M.) in simple force fields in one, two and three dimensions using cartesian, cylindrical polar and spherical polar coordinate systems.

- (b) Dynamics of systems of particles: Difficulty of solving the E.O.M. for systems of particles. Newton's third Law. External and Internal forces. Momentum and Angular Momentum of a system. Torque acting on a system. Conservation of Linear and Angular Momentum. Centre of mass and its properties. Two-body problem.
- (c) Variable- mass system: motion of rocket.
- 2. Work and Energy
 - (a) Work Kinetic Energy Theorem. Conservative Forces: Force as the gradient of a scalar field - concept of Potential Energy. Other equivalent definitions of a Conservative Force. Conservation of Energy.
 - (b) Qualitative study of one dimensional motion from potential energy curves. Stable and Unstable equilibrium.
 - (c) Energy of a system of particles.
- 3. Gravitation and Central Force Motion
 - (a) Central Force. Reduction of the two body central force problem to a one-body problem. Setting up the E.O.M. in plane polar coordinates.
 - (b) Differential equation for the path. Motion under an Inverse-square force. Newton's Law of Gravitation. Inertial and gravitational mass. Kepler's Laws. Satellite in circular orbit and applications. Geosynchronous orbits. Weightlessness. Basic idea of global positioning system (GPS).
 - (c) Gravitational potential energy. Potential and field due to spherical shell and solid sphere.
- 4. Non-Inertial Systems
 - (a) Galilean transformations and Galilean invariance.
 - (b) Non-inertial frames and idea of fictitious forces. E.O.M with respect to a uniformly accelerating frame. E.O.M with respect to a uniformly rotating frame - Centrifugal and Coriolis forces. Laws of Physics in a laboratory on the surface of the earth.
- 5. Rotational Dynamics
 - (a) The Rigid Body: Constraints defining the rigid body. Degrees of freedom for a rigid body;
 - (b) Relation between Angular momentum and Angular Velocity Moment of Inertia Tensor. Calculation of moment of inertia for rectangular, cylindrical and spherical bodies.
 - (c) E.O.M for rotation about a fixed axis.

- (d) Principal Axes transformation. Transformation to a body fixed frame. E.O.M for the rigid body with one point fixed (Euler's equations of motion). General motion of a rigid body - translation plus rotation. Kinetic energy of rotation.
- 6. Elasticity
 - (a) Relation between Elastic constants. Twisting torque on a Cylinder or Wire. Bending of a beam . Internal bending moment. Elastic potential energy.
- 7. Fluid Motion
 - (a) Kinematics of Moving Fluids: Idea of compressible and incompressible fluids, Equation of continuity; streamline and turbulent flow, Reynold's number. Euler's Equation. The special case of fluid statics *F* = ∇*p*: Simple applications (e.g: Pascal's law and Archimedes principle).
 - (b) Poiseuille's equation for Flow of a viscous Liquid through a Capillary Tube.

Reference Books

- An introduction to mechanics, D. Kleppner, R.J. Kolenkow, 1973, McGraw-Hill.
- Mechanics, Berkeley Physics, vol.1, C.Kittel, W.Knight, et.al. 2007, Tata McGraw-Hill.
- Physics, Resnick, Halliday and Walker 8/e. 2008, Wiley. Analytical Mechanics, G.R. Fowles and G.L. Cassiday. 2005, Cengage Learning.
- Feynman Lectures, Vol. I, R.P.Feynman, R.B.Leighton, M.Sands, 2008, Pearson Education
- University Physics, Ronald Lane Reese, 2003, Thomson Brooks/Cole.

Additional Books for Reference

- Mechanics, D.S. Mathur, S. Chand and Company Limited, 2000 University Physics.
- F.W Sears, M.W Zemansky, H.D Young 13/e, 1986, Addison Wesley

Mechanics (Practical)

Paper: PHS-A-CC-1-2-P

Credits: 2

List of Practicals

- 1. To determine the Moment of Inertia of a metallic cylinder / rectangular bar about an axis passing through the C.G. and to determine the Modulus of Rigidity of the suspension wire.
- 2. To determine the Moment of Inertia of a Flywheel.
- 3. To determine Coefficient of Viscosity of water by Capillary Flow Method (Poiseuille's method).
- 4. Determination of Young's modulus of the material of a beam by the method of flexure.
- 5. To determine the elastic constants of a material by Searle's method.
- 6. To determine the value of g using Bar Pendulum.
- 7. To determine the height of a building using sextant.

General Topics

- 1. Measurements of length (or diameter) using vernier caliper, screw gauge and traveling microscope.
- 2. To study the random error in observations.

Reference Books

- Advanced Practical Physics for students, B. L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Edn, 2011, Kitab Mahal.
- Engineering Practical Physics, S.Panigrahi & B.Mallick, 2015, Cengage Learning India Pvt. Ltd.
- Practical Physics, G.L. Squires, 2015, 4th Edition, Cambridge University Press.

2.3 Semester - 2: Electricity and Magnetism

Electricity and Magnetism (Theory)

Paper: PHS-A-CC-2-3-TH

Credits: 4

- 1. Electrostatic Field
 - (a) Coulombs law and Principle of superposition leading to the definition of Electrostatic Field. Field lines.
 - (b) Divergence of the Electrostatic field. Flux, Gauss's theorem of electrostatics. Applications of Gauss theorem to find Electric field due to charge configurations with spherical, cylindrical and planar symmetry.
 - (c) Curl of the Electrostatic Field and its conservative nature. Electric potential. Potential for a uniformly charged spherical shell and solid sphere. Calculation of electric field from potential.
 - (d) Laplace's and Poisson equations. Uniqueness Theorems. Method of Images and its application to: (1) Plane Infinite Sheet and (2) Sphere.
 - (e) Conductors: Electric field and charge density inside and on the surface of a conductor. Conductors in an electrostatic field. Force per unit area on the surface. Capacitance of a conductor. Capacitance an isolated spherical conductor. Parallel plate condenser.
 - (f) Electrostatic energy of system of charges. Electrostatic energy of a charged sphere.
 - (g) Energy per unit volume in electrostatic field.
- 2. Dielectric properties of matter
 - (a) Electric potential and field due to an electric dipole. Electric dipole moment. Force and torque on a dipole.
 - (b) Electric Fields inside matter: Electric Polarization. Bound charges. Displacement vector. Relations between E, P and D. Gauss's theorem in dielectrics. Linear Dielectric medium. Electric Susceptibility and Permittivity. Capacitor (parallel plate, spherical, cylindrical) filled with dielectric.
- 3. The Magnetostatic Field
 - (a) Biot-Savart's law. Force on a moving point charge due to a magnetic field: Lorentz force law. Application of Biot-Savart's law to determine the magnetic field of a straight conductor, circular coil. Force between two straight current carrying wires.
 - (b) Divergence of the magnetic field its solenoidal nature. Magnetic vector potential.

- (c) Curl of the magnetic field. Ampere's circuital law. Its application to
 (1) Infinite straight wire, (2) Infinite planar surface current, and (3) Solenoid.
- 4. Magnetic properties of matter.
 - (a) Potential and field due to a magnetic dipole. Magnetic dipole moment. Force and torque on a magnetic dipole in a uniform magnetic field.
 - (b) Magnetization. Bound currents. The magnetic intensity H. Relation between B, H and M. Linear media. Magnetic Susceptibility and Permeability. Brief introduction of dia-, para- and ferro-magnetic materials. B-H curve and hysteresis.
- 5. Electro-magnetic induction
 - (a) Ohms law and definition of E.M.F. Faraday's laws of electromagnetic induction, Lenz's law. Self-Inductance and Mutual Inductance. Reciprocity Theorem. Introduction to Maxwell's Equations. Charge conservation. Displacement current and resurrection of Equation of Continuity.
 - (b) Energy stored in magnetic field.
- 6. Electrical circuits
 - (a) AC Circuits: Kirchhoff's laws for AC circuits. Complex Reactance and Impedance. Series LCR Circuit: (1) Resonance, (2) Power Dissipation and (3) Quality Factor, and (4) Band Width. Parallel LCR Circuit
- 7. Network theorems
 - (a) Ideal Constant-voltage and Constant-current Sources. Network Theorems: Thevenin theorem, Norton theorem, Superposition theorem, Reciprocity theorem, Maximum Power Transfer theorem. Applications to dc circuits.

Reference Books

- Introduction to Electrodynamics, D.J. Griffiths, 3rd Edn., 1998, Benjamin Cummings.
- Electricity, Magnetism & Electromagnetic Theory, S. Mahajan and Choudhury, 2012, Tata McGraw Hill.
- Electricity and Magnetism, Edward M. Purcell, 1986 McGraw-Hill Education.
- Feynman Lectures Vol.2, R.P.Feynman, R.B.Leighton, M. Sands, 2008, Pearson Education.
- Elements of Electromagnetics, M.N.O. Sadiku, 2010, Oxford University Press.
- Ellectricity and Magnetism, D.Chattopadhyay and P.C.Rakshit, New Central Book Agency, 2011.
- Electricity and Magnetism, J.H.Fewkes & J.Yarwood. Vol. I, 1991, Oxford Univ. Press.

Electricity and Magnetism (Practical)

Paper: PHS-A-CC-2-3-P

Credits: 2

List of Practicals

- 1. To determine an unknown Low Resistance using Potentiometer.
- 2. To determine an unknown Low Resistance using Carey Foster's Bridge.
- 3. To verify the Thevenin and Norton theorems.
- 4. To verify the Superposition, and Maximum power transfer theorems.
- 5. To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance, (c) Quality factor Q, and (d) Band width.
- 6. To study the characteristics of a series RC Circuit.
- 7. Determination of horizontal component of the earths magnetic field.

General Topics

1. Using a Multimeter for measuring (a) Resistances, (b) AC and DC Voltages, (c) DC Current, (d) Capacitances, and (e) Checking electrical fuses should be taught in the Practical classes as a general prerequisite.

Note:

• For the sake of brevity, details of ballistic galvanometer have been omitted from the theory course. Some part of the theory may be needed for the experiments. This should be covered as part of Practical.

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal.

- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- Engineering Practical Physics, S.Panigrahi and B.Mallick, 2015, Cengage Learning.
- A Laboratory Manual of Physics for undergraduate classes, D.P.Khandelwal, 1985, Vani Pub.

2.4 Semester - 2: Waves and Optics

Waves and Optics (Theory)

Paper: PHS-A-CC-2-4-TH

- 1. Oscillations
 - (a) SHM: Simple Harmonic Oscillations. Differential equation of SHM and its solution. Kinetic energy, potential energy, total energy and their time-average values. Damped oscillation. Forced oscillations: Transient and steady states; Resonance, sharpness of resonance; power dissipation and Quality Factor.
- 2. Superposition of Harmonic Oscillations
 - (a) Superposition of Collinear Harmonic oscillations: Linearity and Superposition Principle. Superposition of two collinear oscillations having (1) equal frequencies and (2) different frequencies (Beats). Superposition of N collinear Harmonic Oscillations with (1) equal phase differences and (2) equal frequency differences.
 - (b) Superposition of two perpendicular Harmonic Oscillations: Graphical and Analytical Methods. Lissajous Figures with equal an unequal frequency and their uses.
- 3. Wave motion
 - (a) Plane and Spherical Waves. Longitudinal and Transverse Waves. Plane Progressive (Traveling) Waves. Wave Equation. Particle and Wave Velocities. Differential Equation. Pressure of a Longitudinal Wave. Energy Transport. Intensity of Wave.
 - (b) Water Waves: Ripple and Gravity Waves
- 4. Velocity of Waves
 - (a) Velocity of Transverse Vibrations of Stretched Strings.
 - (b) Velocity of Longitudinal Waves in a Fluid in a Pipe. Newton's Formula for Velocity of Sound. Laplace's Correction.

- 5. Superposition of Harmonic Waves
 - (a) Standing (Stationary) Waves in a String: Fixed and Free Ends. Analytical Treatment. Changes with respect to Position and Time. Energy of Vibrating String. Transfer of Energy. Normal Modes of Stretched Strings. Plucked and Struck Strings. Melde's Experiment.
 - (b) Longitudinal Standing Waves and Normal Modes. Open and Closed Pipes.
 - (c) Superposition of N Harmonic Waves. Phase and Group Velocities.
- 6. Wave optics
 - (a) Electromagnetic nature of light. Definition and properties of wave front. Huygens Principle. Temporal and Spatial Coherence.
- 7. Interference
 - (a) Division of amplitude and wavefront. Young's double slit experiment. Lloyd's Mirror and Fresnel's Biprism. Phase change on reflection: Stokes' treatment. Interference in Thin Films: parallel and wedgeshaped films. Fringes of equal inclination (Haidinger Fringes); Fringes of equal thickness (Fizeau Fringes). Newton's Rings: Measurement of wavelength and refractive index.
- 8. Interferometers
 - (a) Michelson Interferometer-(1) Idea of form of fringes (No theory required), (2) Determination of Wavelength, (3) Wavelength Difference, (4) Refractive Index, and (5) Visibility of Fringes.
 - (b) Fabry-Perot interferometer.
- 9. Diffraction and Holography
 - (a) Fraunhofer diffraction: Single slit. Circular aperture, Resolving Power of a telescope. Double slit. Multiple slits. Diffraction grating. Resolving power of grating.
 - (b) Fresnel Diffraction: Fresnel's Assumptions. Fresnel's Half-Period Zones for Plane Wave. Explanation of Rectilinear Propagation of Light. Theory of a Zone Plate: Multiple Foci of a Zone Plate. Fresnel's Integral, Fresnel diffraction pattern of a straight edge, a slit and a wire.
 - (c) Holography: Principle of Holography. Recording and Reconstruction Method. Theory of Holography as Interference between two Plane Waves. Point source holograms.

- Waves: Berkeley Physics Course, vol. 3, Francis Crawford, 2007, Tata McGraw-Hill.
- Fundamentals of Optics, F.A. Jenkins and H.E. White, 1981, McGraw-Hill.
- Principles of Optics, Max Born and Emil Wolf, 7th Edn., 1999, Pergamon Press.
- Optics, Ajoy Ghatak, 2008, Tata McGraw Hill.
- Optics, 4th Edn., Eugene Hecht, Pearson Education Limited, 2014.
- The Physics of Vibrations and Waves, H. J. Pain, 2013, John Wiley and Sons.
- The Physics of Waves and Oscillations, N.K. Bajaj, 1998, Tata McGraw Hill.
- Fundamental of Optics, A. Kumar, H.R. Gulati and D.R. Khanna, 2011, R. Chand Publications.
- A textbook of Optics; N Subramanyam, B. Lal and M.N.Avadhanulu; S.Chand. Publishing.

Waves and Optics (Practical)

PHS-A-CC-2-4-P

Credits: 2

List of Practicals

- 1. To determine the frequency of an electric tuning fork by Melde's experiment and verify $\lambda^2 T$ law.
- 2. To determine refractive index of the Material of a prism using sodium source.
- 3. To determine the dispersive power and Cauchy constants of the material of a prism using mercury source.
- 4. To determine wavelength of sodium light using Fresnel Biprism.
- 5. To determine wavelength of sodium light using Newton's Rings?
- 6. To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film.
- 7. Measurement of the spacing between the adjacent slits in a grating by measuring $\sin \theta$ vs λ graph of a certain order of grating spectra.

General Topics

1. In the practical classes, students should be thoroughly familiarized with Schuster's focusing for their general proficiency with spectrometers.

Reference Books

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- A Text Book of Practical Physics, I. Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Laboratory Manual of Physics for undergraduate classes, D.P.Khandelwal, 1985, Vani Pub.

2.5 Semester - 3: Mathematical Physics - II

Mathematical Physics - II (Theory)

Paper: PHS-A-CC-3-5-TH

- 1. Fourier Series
 - (a) Periodic functions. Orthogonality of sine and cosine functions, Dirichlet Conditions (Statement only). Expansion of periodic functions in a series of sine and cosine functions and determination of Fourier coefficients. Complex representation of Fourier series. Expansion of functions with arbitrary period. Expansion of non-periodic functions over an interval. Even and odd functions and their Fourier expansions. Application. Summing of Infinite Series. Parseval Identity.
- 2. Frobenius Method and Special Functions
 - (a) Singular Points of Second Order Linear Differential Equations and their importance. Frobenius method and its applications to differential equations. Legendre, Bessel, Hermite and Laguerre Differential Equations. Properties of Legendre Polynomials: Rodrigues Formula, Generating Function, Orthogonality. Simple recurrence relations. Expansion of function in a series of Legendre Polynomials. Bessel Functions of the First Kind: Generating Function, simple recurrence relations. Zeros of Bessel Functions (Jo(x) and J1(x))and Orthogonality.

- 3. Some Special Integrals
 - (a) Beta and Gamma Functions and Relation between them. Expression of Integrals in terms of Gamma Functions. Error Function (Probability Integral).
- 4. Variational calculus in physics
 - (a) Functionals. Basic ideas of functionals. Extremization of action as a basic principle in mechanics. Lagrangian fomulation. Euler's equations of motion for simple systems: harmonics oscillators, simple pendulum, spherical pendulum, coupled oscillators. Cyclic coordinates. Symmetries and conservation laws. Legendre transformations and the Hamiltonian formulation of mechanics. Canonical equations of motion. Applications to simple systems.
- 5. Partial Differential Equations
 - (a) Solutions to partial differential equations, using separation of variables: Laplace's Equation in problems of rectangular, cylindrical and spherical symmetry. Wave equation and its solution for vibrational modes of a stretched string, rectangular and circular membranes. Diffusion Equation.

- Mathematical Methods for Physicists: Arfken, Weber, 2005, Harris, Elsevier.
- Fourier Analysis by M.R. Spiegel, 2004, Tata McGraw-Hill.
- Mathematics for Physicists, Susan M. Lea, 2004, Thomson Brooks/Cole.
- Differential Equations, George F. Simmons, 2006, Tata McGraw-Hill.
- Partial Differential Equations for Scientists & Engineers, S.J. Farlow, 1993, Dover Pub.
- Engineering Mathematics, S.Pal and S.C. Bhunia, 2015, Oxford University Press.
- Mathematical methods for Scientists & Engineers, D.A. McQuarrie, 2003, Viva Books.
- Mathematical Physics, P. K. Chattopadhyay, 2014, New Academic Science.

Mathematical Physics - II (Practical)

Paper: PHS-A-CC-3-5-P

Credits: 2

List of Practicals

- 1. Introduction to Numerical computation using numpy and scipy.
 - (a) Introduction to the python numpy module. Arrays in numpy, array operations, array item selection, slicing, shaping arrays. Basic linear algebra using the linalg submodule. Introduction to online graph plotting using matplotlib. Introduction to the scipy module. Uses in optimization and solution of differential equations.
- 2. Solution of Linear system of equations by Gauss elimination method and Gauss Seidel method.
- 3. Diagonalization of matrices, Inverse of a matrix, Eigen vectors, eigen values problems
 - (a) Solution of mesh equations of electric circuits (3 meshes)
 - (b) Solution of coupled spring mass systems (3 masses)
- 4. Generation of Special functions using User defined functions
 - (a) Generating and plotting Legendre Polynomials Generating and plotting Bessel function (Make use of generating function and recursion formula).
- 5. Root finding: Bisection and Newton-Raphson method.
- 6. Interpolation by Lagranges method.
- 7. Numerical differentiation forward and backward difference formulae.
- 8. Numerical integration trapezoidal and simpsons rule.
- 9. Solution of ODE: First order Differential equation Euler's method.
- 10. Basic 3D graph plotting plotting functions and data files, parametric plots, Surface and contour plots.

Note:

A list of suggestive numerical problems may be circulated from time to time.

- Mathematical Methods for Physics and Engineers, K.F Riley, M.P. Hobson and S. J. Bence, 3rd ed., 2006, Cambridge University Press.
- Complex Variables, A.S. Fokas & M.J. Ablowitz, 8th Ed., 2011, Cambridge Univ. Press.
- Numpy beginners guide, Idris Alba, 2015, Packt Publishing.
- Computational Physics, D. Walker, 1st Edn., 2015, Scientific International Pvt. Ltd.
- Simulation of ODE/PDE Models with MATLAB, OCTAVE and SCILAB: Scientific and Engineering Applications: A.V. Wouwer, P. Saucez, C.V. Fernandez. 2014 Springer.

2.6 Semester - 3: Thermal Physics

Thermal Physics (Theory)

Paper: PHS-A-CC-3-6-TH

- 1. Introduction to Thermodynamics
 - (a) Zeroth and First Law of Thermodynamics: Extensive and intensive Thermodynamic Variables, Thermodynamic Equilibrium, Zeroth Law of Thermodynamics & Concept of Temperature. Concept of Work & Heat, State Functions, Internal Energy and First Law of Thermodynamics. Its differential form, First Law & various processes. Applications of First Law: General Relation between CP and CV, Work Done during Isothermal and Adiabatic Processes, Compressibility and Expansion Co-efficient.
 - (b) Second Law of Thermodynamics: Reversible and Irreversible process with examples. Conversion of Work into Heat and Heat into Work. Heat Engines. Carnot's Cycle, Carnot engine & efficiency. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence.
 - (c) Carnot's Theorem. Applications of Second Law of Thermodynamics: Thermodynamic Scale of Temperature and its Equivalence to Perfect Gas Scale.
 - (d) Entropy: Concept of Entropy, Clausius Theorem. Clausius Inequality, Second Law of Thermodynamics in terms of Entropy. Entropy of a perfect gas. Principle of Increase of Entropy. Entropy Changes in Reversible and Irreversible processes with examples. Entropy of the Universe. Entropy Changes in Reversible and Irreversible Processes. Principle of Increase of Entropy. Temperature-Entropy diagrams for Cycle. Third Law of Thermodynamics. Unattainability of Absolute Zero.

- 2. Thermodynamic Potentials
 - (a) Thermodynamic Potentials: Internal Energy, Enthalpy, Helmholtz Free Energy, Gibb's Free Energy. Their Definitions, Properties and Applications. Surface Films and Variation of Surface Tension with Temperature. Magnetic Work, Cooling due to adiabatic demagnetization, First and second order Phase Transitions with examples, Clausius Clapeyron Equation and Ehrenfest equations
 - (b) Maxwell's Thermodynamic Relations
 - (c) Derivations and applications of Maxwell's Relations, Maxwell's Relations: (1) Clausius Clapeyron equation, (2) Values of Cp-Cv, (3) TdS Equations, (4) Joule-Kelvin coefficient for Ideal and Van der Waal Gases, (5) Energy equations, (6) Change of Temperature during Adiabatic Process.
- 3. Kinetic Theory of Gases
 - (a) Distribution of Velocities: Maxwell-Boltzmann Law of Distribution of Velocities in an Ideal Gas and its Experimental Verification. Doppler Broadening of Spectral Lines and Stern's Experiment. Mean, RMS and Most Probable Speeds. Degrees of Freedom. Law of Equipartition of Energy (No proof required). Specific heats of Gases.
 - (b) Molecular Collisions: Mean Free Path. Collision Probability. Estimates of Mean Free Path. Transport Phenomenon in Ideal Gases: (1) Viscosity, (2) Thermal Conductivity and (3) Diffusion. Brownian Motion and its Significance.
 - (c) Real Gases: Behavior of Real Gases: Deviations from the Ideal Gas Equation. The Virial Equation. Andrew's Experiments on CO2 Gas. Critical Constants. Continuity of Liquid and Gaseous State. Vapour and Gas. Boyle Temperature. Van der Waal's Equation of State for Real Gases. Values of Critical Constants. Law of Corresponding States. Comparison with Experimental Curves. P-V Diagrams. Joule's Experiment. Free Adiabatic Expansion of a Perfect Gas. Joule-Thomson Porous Plug Experiment. Joule- Thomson Effect for Real and Van der Waal Gases. Temperature of Inversion. Joule-Thomson Cooling.
- 4. Conduction of Heat
 - (a) Thermal conductivity, diffusivity. Fourier's equation for heat conduction – its solution for rectilinear flow of heat.

• Heat and Thermodynamics, M.W. Zemansky, Richard Dittman, 1981, McGraw-Hill.

- Thermal Physics, S. Garg, R. Bansal and Ghosh, 2nd Edition, 1993, Tata McGraw-Hill.
- Modern Thermodynamics with Statistical Mechanics, Carl S. Helrich, 2009, Springer.
- Thermodynamics, Kinetic Theory & Statistical Thermodynamics, Sears & Salinger. 1988, Narosa.
- Concepts in Thermal Physics, S.J. Blundell and K.M. Blundell, 2nd Ed., 2012, Oxford University Press
- Thermodynamics and an introduction to thermostatistics, H. B. Callen, 1985, Wiley.
- Thermal Physics, A. Kumar and S.P. Taneja, 2014, R. Chand Publications.

Thermal Physics (Practical)

Paper: PHS-A-CC-3-6-P

Credits: 2

List of Practicals

- 1. Verification of Stefan's law using a torch bulb.
- 2. Determination of the coefficient of thermal expansion of a metallic rod using an optical lever.
- 3. Calibration of a thermocouple by direct measurement of the thermo-emf using operational amplifier and the constants. [One end in ice and another end at water bath which to be heated.]
- 4. Calibration of a thermocouple by direct measurement of the thermo-emf using potentiometer and the constants. [one end in ice and another end at water bath which to be heated.
- 5. Calibration of thermocouple [one end at room temperature other end in the oil bath] and determination of boiling point of water.
- 6. To determine the Coefficient of Thermal Conductivity of a bad conductor by Lee and Charlton's disc method.
- 7. To determine the Temperature Coefficient of Resistance by Platinum Resistance Thermometer (PRT).

- Advanced Practical Physics for students, B. L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Laboratory Manual of Physics for undergraduate classes, D. P. Khandelwal, 1985, Vani Pub.

2.7 Semester - 3: Digital Systems and Applications

Digital Systems and Applications (Theory)

Paper: PHS-A-CC-3-7-TH

- 1. Integrated Circuits
 - (a) Active & Passive components. Discrete components. Wafer. Chip. Advantages and drawbacks of ICs. Scale of integration: SSI, MSI, LSI and VLSI (basic idea and definitions only). Classification of ICs. Examples of Linear and Digital lCs.
- 2. Digital Circuits
 - (a) Difference between Analog and Digital Circuits. Binary Numbers. Decimal to Binary and Binary to Decimal Conversion. BCD, Octal and Hexadecimal numbers. AND, OR and NOT Gates (realization using Diodes and Transistor). NAND and NOR Gates as Universal Gates. XOR and XNOR Gates and application as Parity Checkers.
- 3. Boolean algebra
 - (a) De Morgan's Theorems. Boolean Laws. Simplification of Logic Circuit using Boolean Algebra. Fundamental Products. Idea of Minterms and Maxterms. Conversion of a Truth table into Equivalent Logic Circuit by (1) Sum of Products Method and (2) Karnaugh Map.
- 4. Data processing circuits
 - (a) Basic idea of Multiplexers, De-multiplexers, Decoders, Encoders.
- 5. Circuits
 - (a) Arithmetic Circuits: Binary Addition. Binary Subtraction using 2's Complement. Half and Full Adders. Half & Full Subtractors, 4-bit binary Adder/Subtractor.

- Sequential Circuits: SR, D, and JK Flip-Flops. Clocked (Level and Edge Triggered) Flip-Flops. Preset and Clear operations. Race-around conditions in JK Flip-Flop. M/S JK Flip-Flop.
- 7. Timers
 - (a) IC 555: block diagram and applications: Astable multivibrator and Monostable multivibrator.
- 8. Shift registers
 - (a) Serial-in-Serial-out, Serial-in-Parallel-out, Parallel-in-Serial-out and Parallel-in-Parallel-out Shift Registers (only up to 4 bits).
- 9. Counters (4 bits)
 - (a) Ring Counter. Asynchronous counters, Decade Counter. Synchronous Counter.
- 10. Computer Organization
 - (a) Input/Output Devices. Data storage (idea of RAM and ROM). Computer memory. Memory organization & addressing. Memory Interfacing. Memory Map.

- Digital Principles and Applications, A.P. Malvino, D. P. Leach and Saha, 7th Ed., 2011, Tata McGraw
- Fundamentals of Digital Circuits, Anand Kumar, 2nd Edn, 2009, PHI Learning Pvt. Ltd.
- Digital Circuits and systems, Venugopal, 2011, Tata McGraw Hill.
- Digital Electronics G K Kharate ,2010, Oxford University Press
- Digital Systems: Principles & Applications, R.J.Tocci, N.S.Widmer, 2001, PHI Learning
- Logic circuit design, Shimon P. Vingron, 2012, Springer.
- Digital Electronics, Subrata Ghoshal, 2012, Cengage Learning.
- Digital Electronics, S.K. Mandal, 2010, 1st edition, McGraw Hill
- Microprocessor Architecture Programming & applications with 8085, 2002, R.S. Goankar, Prentice Hall.

Digital Systems and Applications (Practical)

Paper: PHS-A-CC-3-7-P

Credits: 2

List of Practicals

- 1. To design OR & AND logic with diode and resistor. Basic logic gates with Transistors. To verify the logics by any type of universal gate NAND/NOR.
- 2. Formation of different combinational problems by construction of Truth Table and implementation using basic logic gates.
- 3. Construction of half adder and full adder
- 4. Construction of half subtractor, full subtractor, adder-subtractor using full adder IC
- 5. Construction of FF circuits using NAND gates.
- 6. Construction of 4 bit shift registers (serial & parallel) using D type FF IC.
- 7. Construction of astable multivibrator using 555 Timer.

Reference Books

- Modern Digital Electronics, R.P. Jain, 4th Edition, 2010, Tata McGraw Hill.
- Basic Electronics: A text lab manual, P.B. Zbar, A.P. Malvino, M.A. Miller, 1994, Mc-Graw Hill.

2.8 Semester - 4: Mathematical Physics - III

Mathematical Physics - III (Theory)

Paper: PHS-A-CC-4-8-TH

- 1. Complex Analysis
 - (a) Brief Revision of Complex Numbers. and their Graphical Representation. Euler's formula, Roots of Complex Numbers. Functions of Complex Variables. Analyticity and Cauchy-Riemann Conditions. Examples of analytic functions. Singular functions: poles and branch points, order of singularity, branch cuts. Integration of a function of a complex variable. Cauchy's Inequality. Cauchy's Integral formula. Simply and multiply connected region. Laurent and Taylor's expansion. Residues and Residue Theorem. Application in solving Definite Integrals.

- 2. Integrals Transforms
 - (a) Fourier Transforms: Fourier Integral theorem. Fourier Transform. Examples. Fourier transform of trigonometric, Gaussian, finite wave train & other functions. Representation of Dirac delta function as a Fourier Integral. Fourier transform of derivatives, Inverse Fourier transform, Convolution theorem. Properties of Fourier transforms (translation, change of scale, complex conjugation, etc.). Three dimensional Fourier transforms with examples. Application of Fourier Transforms to differential equations: One dimensional Wave and Diffusion/Heat Flow Equations.
- 3. Introduction to probability
 - (a) Independent random variables: Sample space and Probability distribution functions. Binomial, Gaussian, and Poisson distribution with examples. Mean and variance.
- 4. Special theory of Relativity
 - (a) Michelson-Morley Experiment and its outcome. Postulates of Special Theory of Relativity. Lorentz Transformations. Simultaneity and order of events. Lorentz contraction. Time dilation. Relativistic transformation of velocity. Relativistic Dynamics. Variation of mass with velocity. Massless Particles. Mass-energy Equivalence. Transformation of Energy and Momentum.
 - (b) Relativity in Four Vector Notation: Four-vectors, Lorentz Transformation and Invariant interval, Space-time diagrams. Proper time and Proper velocity. Relativistic energy and momentum - Four momentum. Conservation of four momentum and applications to collisions. Minkowski Force.

- Mathematical Methods for Physics and Engineers, K.F Riley, M.P. Hobson and S. J. Bence, 3rd ed., 2006, Cambridge University Press.
- Mathematics for Physicists, P. Dennery and A.Krzywicki, 1967, Dover Publications.
- Complex Variables, A.S.Fokas & M.J.Ablowitz, 8th Ed., 2011, Cambridge Univ. Press.
- Complex Variables, A.K. Kapoor, 2014, Cambridge Univ. Press.
- Complex Variables and Applications, J.W. Brown & R.V. Churchill, 7th Ed. 2003, Tata McGraw-Hill.
- First course in complex analysis with applications, D.G. Zill and P.D. Shanahan, 1940, Jones & Bartlett.

- Relativity The Special and General Theory, A. Einstein, Methuen & Co. Ltd., 1920.
- Introduction to Special Relativity, R. Resnick, 2010, John Wiley and Sons.
- Introduction to Electrodynamics, D.J. Griffiths, 3rd Ed., 1998, Benjamin Cummings, 1991.

Mathematical Physics - III (Practical)

Paper: PHS-A-CC-4-8-P

Credits: 2

List of Practicals

- 1. Solution of ODE/PDE:
 - (a) Initial value problem: Modified-Euler and Runge-Kutta second order and fourth order methods.
 - (b) Boundary value problems: Finite difference method with fixed step size.

Application to simple physical problems.

2. Dirac-delta function:

Evaluate $\frac{1}{\sqrt{2\pi\sigma^2}} \int e^{-\frac{(x-2)^2}{2\sigma^2}} (x+3) dx$ for x = 1, 0.1, 0.01 and show that it tends to 5.

- 3. Fourier series
 - (a) Program to sum $\sum_{n=0}^{\infty} (0.2)^n$
 - (b) Evaluate the fourier coefficients of a given periodic function (square wave).
- 4. Frobenius method and special functions.
 - (a) $\int_{-1}^{+1} P_n(\mu) P_m(\mu) d\mu = \delta_{nm}$
 - (b) Plot $P_{n}(x), j_{\nu}(x)$
 - (c) show recursion relation.
- 5. Evaluation of trigonometric functions e.g. $\sin \theta$. Given Bessel's function at N points find its value at an intermediate point.
- 6. Complex analysis:
 - (a) Integrate $\int_0^\infty \frac{\sin x}{x} dx$ numerically and check with computer integration

- (b) Root finding:
 - i. Compute the nth roots of unity for n = 2, 3, and 4.
 - ii. Find the two square roots of -5 + 12i.
- 7. Integral transform: FT of e^{-x^2}
- 8. Introduction to OCTAVE.

Note:

A list of suggestive numerical problems may be circulated from time to time.

Reference Books

- Mathematical Methods for Physics and Engineers, K.F Riley, M.P. Hobson and S. J. Bence, 3rd ed., 2006, Cambridge University Press.
- Mathematics for Physicists, P. Dennery and A. Krzywicki, 1967, Dover Publications.
- Simulation of ODE/PDE Models with MATLAB, OCTAVE and SCILAB: Scientific and Engineering Applications: A. Vande Wouwer, P. Saucez, C. V. Fernanndez. 2014 Springer ISBN: 978-3319067896.
- A Guide to MATLAB, B.R. Hunt, R.L. Lipsman, J.M. Rosenberg, 2014, 3rd Edn., Cambridge University Press.
- https://web.stanford.edu/ boyd/ee102/laplace_ckts.pdf.
- https://ocw.nthu.edu.tw/ocw/upload/12/244/12handout.pdf.

2.9 Semester - 4: Elements of Modern Physics

Elements of Modern Physics (Theory)

Paper: PHS-A-CC-4-9-TH

- 1. Unit 1
 - (a) Blackbody Radiation, Planck's quantum, Planck's constant. Photoelectric effect and Compton scattering - light as a collection of photons. Davisson-Germer experiment. De- Broglie wavelength and matter waves. Wave-particle duality. Wave description of particles by wave packets. Group and Phase velocities and relation between them. Probability interpretation: Normalized wave functions as probability amplitudes.
 - (b) Two-Slit experiment with photons and electrons. Linear superposition principle as a consequence.

- (c) Position measurement- gamma ray microscope thought experiment. Heisenberg uncertainty principle (Statement with illustrations). Impossibility of a particle following a trajectory.
- 2. Unit 2
 - (a) Postulates of Quantum Mechanics: States as normalized vectors (normalized wave functions). Dynamical variables as linear Hermitian operators. Predictions of quantum mechanics from solving the eigenvalue equation for the observables. Illustration using two and three level systems. Expectation values of observables.
 - (b) Time evolution: Schrodinger equation for non-relativistic particles. Stationary states. Solution of Schrodinger's equation using expansion in stationary states. Time evolution of expectation values.
 - (c) Application to one dimensional systems. Particle moving in one dimension: Position, Momentum and Energy operators. Probability and probability current densities in one dimension. Boundary conditions on wave functions. Ehrenfest theorem. Particle in a one dimensional infinitely rigid box: energy eigenvalues and eigenfunctions, normalization. Quantum dot. Quantum mechanical scattering and tunneling in one dimension across a step potential & rectangular potential barrier.
 - (d) Simultaneous measurements: Compatible and incompatible observables and their relation to commutativity. Heisenberg's uncertainty relation for a pair of incompatible observables. Complete and incomplete measurements - degeneracy. Illustration of the ideas using the Angular momentum operators.
- 3. Unit 3
 - (a) Size and structure of atomic nucleus and its relation with atomic weight; Impossibility of an electron being in the nucleus as a consequence of the uncertainty principle.
 - (b) Nature of nuclear force, NZ graph.
 - (c) Nuclear Models: Liquid Drop model. semi-empirical mass formula and binding energy. Nuclear Shell Model. Magic numbers.
- 4. Unit 4
 - (a) Radioactivity: stability of the nucleus; Law of radioactive decay; Mean life and half-life; Alpha decay; Beta decay- energy released, spectrum and Pauli's prediction of neutrino; Gamma ray emission, energy-momentum conservation: electron-positron pair creation by gamma photons in the vicinity of a nucleus.

- (b) Fission and fusion: mass deficit, relativity and generation of energy. Fission - nature of fragments and emission of neutrons. Nuclear reactor: slow neutrons interacting with Uranium 235; Fusion and thermonuclear reactions driving stellar energy (brief qualitative discussions)
- (c) Lasers: Einstein's A and B coefficients. Metastable states. Spontaneous and Stimulated emissions. Optical Pumping and Population Inversion. Three-Level and Four-Level Lasers. Ruby Laser and He-Ne Laser. Basic lasing.

- Concepts of Modern Physics, Arthur Beiser, 2002, McGraw-Hill.
- Primer of Quantum Mechanics; M. Chester; John Wiley & Sons, 1987.
- Introduction to Quantum Mechanics, David J. Griffith, 2005, Pearson Education.
- Physics for scientists and Engineers with Modern Physics, Jewett and Serway, 2010, Cengage Learning.
- Modern Physics, G.Kaur and G.R. Pickrell, 2014, McGraw Hill.
- Quantum Mechanics: Theory & Applications, A.K.Ghatak & S.Lokanathan, 2004, Macmillan

Additional Books for Reference

- Modern Physics, J.R. Taylor, C.D. Zafiratos, M.A. Dubson, 2004, PHI Learning.
- Theory and Problems of Modern Physics, Schaum's outline, R. Gautreau and W. Savin, 2nd Edn, Tata McGraw-Hill Publishing Co. Ltd.
- Quantum Physics, Berkeley Physics, Vol.4. E.H.Wichman, 1971, Tata McGraw-Hill Co.
- Basic ideas and concepts in Nuclear Physics, K.Heyde, 3rd Edn., Institute of Physics Pub.
- Nuclear Physics; S.N.Ghosal; S. Chand Publishing.
- Laser Physics and Spectroscopy, P.N.Ghosh, Levant Books, India, 2016.
- Six Ideas that Shaped Physics: Particle Behave like Waves, T.A.Moore, 2003, McGraw Hill.

Elements of Modern Physics (Practical)

Paper: PHSA-CC-4-9-P

Credits: 2

List of Practicals

- 1. Measurement of Plank constant using LED
- 2. Determination of ionization potential of Mercury
- 3. Determination of e/m by using bar magnet.
- 4. To study the photoelectric effect: variation of photocurrent versus intensity and wavelength of light.
- 5. To determine the wavelength of H-alpha emission line of Hydrogen atom.
- 6. To show the tunneling effect in tunnel diode using I-V characteristics.
- 7. To determine (1) wavelength and (2) angular spread of He-Ne laser/ solid state laser using plane diffraction grating.

Reference Books

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Edn, 2011,Kitab Mahal.

2.10 Semester - 4: Analog Systems and Applications

Analog Systems and Applications (Theory)

Paper: PHS-A-CC-4-10-TH

- 1. Semiconductor Diodes
 - (a) P and N type semiconductors. Energy Level Diagram. Conductivity and Mobility, Concept of Drift velocity. PN Junction Fabrication (Simple Idea). Barrier Formation in PN Junction Diode. Static and Dynamic Resistance. Current Flow Mechanism in Forward and Reverse Biased Diode. Drift Velocity. Derivation for Barrier Potential, Barrier Width and Current for Step Junction. Current Flow Mechanism in Forward and Reverse Biased Diode.

- 2. Two-terminal Devices and their Applications.
 - (a) Rectifier Diode: Half-wave Rectifiers. Centre-tapped and Bridge Full-wave Rectifiers, Calculation of Ripple Factor and Rectification Efficiency, C-filter.
 - (b) Zener Diode and Voltage Regulation. Principle and structure of (1) LEDs, (2) Photodiode and (3) Solar Cell.
- 3. Bipolar Junction transistors n-p-n and p-n-p Transistors. Characteristics of CB, CE and CC Configurations. Current gains α and β Relations between α and β . Load Line analysis of Transistors. DC Load line and Q-point. Physical Mechanism of Current Flow. Active, Cutoff and Saturation Regions.
- 4. Field Effect transistors Basic principle of operations only.
- 5. Amplifiers
 - (a) Amplifiers: Transistor Biasing and Stabilization Circuits. Fixed Bias and Voltage Divider Bias. Transistor as 2-port Network. h-parameter Equivalent Circuit. Analysis of a single-stage CE amplifier using Hybrid Model. Input and Output Impedance. Current, Voltage and Power Gains. Classification of Class A, B & C Amplifiers. Frequency response of a CE amplifier.
 - (b) Coupled Amplifier: Two stage RC-coupled amplifier.
 - (c) Feedback in Amplifiers: Effects of Positive and Negative Feedback on Input Impedance, Output Impedance, Gain, Stability, Distortion and Noise.
 - (d) Sinusoidal Oscillators: Barkhausen's Criterion for self-sustained oscillations. RC Phase shift oscillator, determination of Frequency. Hartley & Colpitts oscillators.
 - (e) Operational Amplifiers (Black Box approach): Characteristics of an Ideal and Practical Op-Amp. (IC 741) Open-loop and Closed-loop Gain. Frequency Response. CMRR. Slew Rate and concept of Virtual ground.
 - (f) Applications of Op-Amps: Linear (1) Inverting and non-inverting amplifiers, (2) Adder, (3) Subtractor, (4) Differentiator, (5) Integrator, (6) Log amplifier, (7) Zero crossing detector (8) Wein bridge oscillator. Non-linear (1) inverting and non-inverting comparators, (2) Schmidt triggers.
 - (g) Conversion: Resistive network (Weighted and R-2R Ladder). Accuracy and Resolution. A/D Conversion (successive approximation)

- Integrated Electronics, J. Millman and C.C. Halkias, 1991, Tata Mc-Graw Hill.
- Electronics: Fundamentals and Applications, J.D. Ryder, 2004, Prentice Hall. Solid State Electronic Devices, B.G.Streetman & S.K.Banerjee, 6th Edn.,2009, PHI.
- Learning Electronic Devices & circuits, S.Salivahanan & N.S.Kumar, 3rd Ed., 2012, Tata Mc-Graw Hill.
- OP-Amps and Linear Integrated Circuit, R. A. Gayakwad, 4th edition, 2000, Prentice Hall.
- Microelectronic circuits, A.S. Sedra, K.C. Smith, A.N. Chandorkar, 2014, 6th Edn., Oxford University Press.
- Electronic circuits: Handbook of design & applications, U.Tietze, C.Schenk,2008, Springer.
- Semiconductor Devices: Physics and Technology, S.M. Sze, 2nd Ed., 2002, Wiley India.
- Microelectronic Circuits, M.H. Rashid, 2nd Edition, Cengage Learning Electronic Devices, 7/e Thomas L. Floyd, 2008, Pearson India.

Analog Systems and Applications (Practical)

Paper: PHS-A-CC-4-10-P

Credits: 2

List of Practicals

- 1. To study the reverse characteristics of Zener diode and study the load and line regulation.
- 2. To study the static characteristics of BJT in CE Configuration.
- 3. To design a CE transistor amplifier of a given gain (mid-gain) using voltage divider bias
- 4. To study the frequency response of the BJT amplifier in CE mode.
- 5. To study the static characteristics of FET.
- 6. To study OPAMP inverting amplifier, non inverting amplifier, adder, substractar, comparator, integrator, differentiator.
- 7. To design a Wien bridge oscillator for given frequency using an op-amp.

- Basic Electronics: A text lab manual, P.B. Zbar, A.P. Malvino, M.A. Miller, 1994, Mc-Graw Hill.
- OP-Amps and Linear Integrated Circuit, R. A. Gayakwad, 4th edition, 2000, Prentice Hall.
- Electronic Principle, Albert Malvino, 2008, Tata Mc-Graw Hill. Electronic Devices & circuit Theory, R.L. Boylestad & L.D.
- Nashelsky, 2009, Pearson.

2.11 Semester - 5: Quantum Mechanics and Applications

Quantum Mechanics and Applications (Theory)

Paper: PHS-A-CC-5-11-TH

- 1. Schrodinger Equation
 - (a) Description of a particle using wave packets. Spread of the Gaussian wave-packet for a free particle in one dimension. Fourier transforms and momentum space wavefunction. Position-Momentum uncertainty.
- 2. General discussion of bound states in an arbitrary potential
 - (a) Continuity of wave function, boundary condition and emergence of discrete energy levels. Application to one-dimensional problem square well potential.
- 3. Quantum mechanics of simple harmonic oscillator.
 - (a) Setting up the eigenvalue equation for the Hamiltonian. Energy levels and energy eigenfunctions in terms of Hermite polynomials (Solution to Hermite differential equation may be assumed). Ground state, zero point energy & uncertainty principle.
- 4. Quantum theory of hydrogen-like atoms
 - (a) Reduction of a two body problem to a one body problem. The time independent Schrodinger equation for a particle moving under a central force the Schrodinger equation in spherical polar coordinates. Separation of variables. Angular equation and orbital angular momentum. Spherical Harmonics (Solution to Legendre differential equation may be assumed). Radial equation for attractive coulomb interaction Hydrogen atom. Solution for the radial wavefunctions (Solution to Laguerre differential equation may be assumed). Shapes of the probability densities for ground & first excited states. Orbital angular momentum quantum numbers l and m; s, p, d, shells.

- 5. Generalized Angular Momenta and Spin.
 - (a) Generalized angular momentum. Electron's magnetic Moment and Spin Angular Momentum. Gyromagnetic Ratio and Bohr Magneton and the g factor. Energy associated with a magnetic dipole placed in magnetic field. Larmor's Theorem. Stern-Gerlach Experiment.
 - (b) Addition of angular momenta statement only. Restriction of eigenvalues from $|j_1 j_2|$ to $|j_1 + j_2|$.
- 6. Spectra of Hydrogen atom and its fine structure
 - (a) Formula for first order nondegenerate perturbative correction to the eigenvalue statement only.
 - (b) Spin-orbit interaction and relativistic correction to the kinetic energy and Darwin term.
 - (c) Fine structure of the hydrogen atom spectrum
- 7. Atoms in Electric & Magnetic Fields
 - (a) Zeeman Effect: Normal and Anomalous Zeeman Effect (Formula for first order perturbative correction to the eigenvalue to be assumed).
 - (b) Paschen Back effect & Stark effects (Qualitative Discussion only).
- 8. Many electron atoms
 - (a) Identical particles. Symmetric & Antisymmetric Wave Functions. Pauli's Exclusion Principle. Hund's Rule. Periodic table.
 - (b) Fine structure splitting. L-S and J-J coupling scheme. Spectral Notations for Atomic States and Term symbols. Spectra of Alkali Atoms (Na etc.).

- A Text book of Quantum Mechanics, P.M.Mathews and K.Venkatesan, 2nd Ed., 2010, McGraw Hill
- Quantum Mechanics, Robert Eisberg and Robert Resnick, 2nd Edn., 2002, Wiley.
- Introduction to Quantum Mechanics, D.J. Griffith, 2nd Ed. 2005, Pearson Education
- Quantum Mechanics, Leonard I. Schiff, 3rd Edn. 2010, Tata McGraw Hill.
- Quantum Mechanics, G. Aruldhas, 2nd Edn. 2002, PHI Learning of India.
- Quantum Mechanics, Bruce Cameron Reed, 2008, Jones and Bartlett Learning.

- Quantum Mechanics: Foundations & Applications, Arno Bohm, 3rd Edn., 1993, Springer
- Quantum Mechanics for Scientists & Engineers, D.A.B. Miller, 2008, Cambridge University Press

Additional Books for Reference

- Quantum Mechanics, Eugen Merzbacher, 2004, John Wiley and Sons, Inc.
- Quantum Mechanics, Walter Greiner, 4th Edn., 2001, Springer

Quantum Mechanics and Applications (Practical)

Paper: PHS-A-CC-5-11-P

Credits: 2

List of Practical

1. Solve the s-wave Schrödinger equation for the ground state and the first excited state of the hydrogen atom

$$\frac{d^{2}y}{dr^{2}}=A\left(r\right)u\left(r\right),\qquad A\left(r\right)=\frac{2m}{\hbar^{2}}\left(V\left(r\right)-E\right),\qquad V\left(r\right)=\frac{-e^{2}}{r}$$

Here, *m* is the reduced mass of the electron. Obtain the energy eigenvalues and plot the corresponding wavefunctions. Remember that the ground state energy of the hydrogen atom is -13.6 eV. Take $e = 3.795 \ (eV \text{\AA})^{\frac{1}{2}}$, $\hbar c = 1973 \ (eV \text{\AA})$ and $m = 0.511 \times 10^6 \ (\frac{eV}{c^2})$. [nm may be used instead of Å- make necessary conversions].

2. Solve the s-wave radial Schrodinger equation for an atom:

$$\frac{d^{2}y}{dr^{2}} = A(r)u(r), \qquad A(r) = \frac{2m}{\hbar^{2}}(V(r) - E)$$

where m is the reduced mass of the system (which can be chosen to be the mass of an electron), for the screened coulomb potential:

$$V\left(r\right) = \frac{-e^2}{r}e^{-\frac{r}{a}}$$

Find the energy (in eV) of the ground state of the atom to an accuracy of three significant digits. Also, plot the corresponding wavefunction. Take $e = 3.795 \ (eV \text{\AA})^{\frac{1}{2}}, \ m = 0.511 \times 10^6 \ (\frac{eV}{c^2}), \ \text{and} \ a = 3 \ \text{\AA}, \ 5 \ \text{\AA}, \ 7 \ \text{\AA}$. In these units $\hbar c = 1973 \ (eV \text{\AA})$. The ground state energy is expected to be above -12 eV in all three cases. [nm may be used instead of \AA - make necessary conversions]

3. Solve the s-wave radial Schrödinger equation for a particle of mass m.

$$\frac{d^2y}{dr^2} = A(r)u(r), \qquad A(r) = \frac{2m}{\hbar^2}(V(r) - E)$$

for the anharmonic oscillator potential:

$$V(r) = \frac{1}{2}k^2 + \frac{1}{3}br^3$$

for the ground state energy (in MeV) of particle to an accuracy of three significant digits. Also, plot the corresponding wave function. Choose $m = 940 \frac{MeV}{c^2}$, $k = 100 Mev fm^{-2} b = 0, 10, 30 Mev fm^{-3}$. In these units, $\hbar c = 197.3 MeV$, fm. The ground state energy is expected to lie between 90 and 110 MeV for all three cases.

4. Solve the s-wave radial Schrodinger equation for the vibrations of hydrogen molecule:

$$\frac{d^2y}{dr^2} = A(r)u(r), \qquad A(r) = \frac{2\mu}{\hbar^2}(V(r) - E)$$

where μ is the reduced mass of the two-atom system for the Morse potential:

$$V(r) = D\left(e^{-2\alpha r'} - e^{-\alpha r'}\right), \qquad r' = \frac{r - r_0}{r}$$

Find the lowest vibrational energy (in MeV) of the molecule to an accuracy of three significant digits. Also plot the corresponding wave function. Take $m = 940 \times 10^6 \frac{eV}{c^2}$, D = 0.755501 eV, $\alpha = 1.44$, $r_0 = 0.131349$ Å

[nm may be used instead of the unit Å- make necessary conversions]

- An introduction to computational Physics, T.Pang, 2nd Edn., 2006, Cambridge Univ.Press
- Simulation of ODE/PDE Models with MATLAB, OCTAVE and SCILAB: Scientific & Engineering Applications: A. Vande Wouwer, P. Saucez, C. V. Fernandez. 2014, Springer.

2.12 Semester - 5: Solid State Physics

Solid State Physics (Theory)

Paper: PHS-A-CC-5-12-TH

- 1. Crystal Structure
 - (a) Solids: Amorphous and Crystalline Materials. Lattice Translation Vectors. Lattice with a Basis Central and Non-Central Elements. Unit Cell. Miller Indices. Reciprocal Lattice. Types of Lattices. Brillouin Zones. Diffraction of X-rays by Crystals. Bragg's Law. Atomic and Geometrical Factor.
- 2. Elementary Lattice Dynamics
 - (a) Lattice Vibrations and Phonons: Linear Monoatomic and Diatomic Chains. Acoustical and Optical Phonons. Qualitative Description of the Phonon Spectrum in Solids. Dulong and Petit's Law, Einstein and Debye theories of specific heat of solids. T^3 law
- 3. Magnetic Properties of Matter
 - (a) Dia-, Para-, Ferri- and Ferromagnetic Materials. Classical Langevin Theory of Dia- and Paramagnetic Domains. Quantum Mechanical Treatment of Paramagnetism. Curie's law, Weiss's Theory of Ferromagnetism and Ferromagnetic Domains. Discussion of B-H Curve. Hysteresis and Energy Loss.
- 4. Dielectric Properties of Materials
 - (a) Polarization. Local Electric Field at an Atom. Depolarization Field. Electric Susceptibility. Polarizability. Clausius Mosotti Equation. Classical Theory of Electric Polarizability. Normal and Anomalous Dispersion. Cauchy and Sellmeir relations. Langevin-Debye equation. Complex Dielectric Constant. Optical Phenomena. Application: Plasma Oscillations, Plasma Frequency, Plasmons, TO modes.
- 5. Ferroelectric Properties of Materials
 - (a) Structural phase transition, Classification of crystals, Piezoelectric effect, Pyroelectric effect, Ferroelectric effect, Electrostrictive effect, Curie-Weiss Law, Ferroelectric domains, PE hysteresis loop.
- 6. Elementary band theory
 - (a) Kronig Penny model. Band Gap. Conductor, Semiconductor (P and N type) and insulator. Conductivity of Semiconductor, mobility, Hall Effect. Measurement of conductivity (4 probe method) & Hall coefficient.

- 7. Superconductivity
 - (a) Experimental Results. Critical Temperature. Critical magnetic field. Meissner effect. Type I and type II Superconductors, London's Equation and Penetration Depth. Isotope effect. Idea of BCS theory (No derivation)

- Introduction to Solid State Physics, Charles Kittel, 8th Edition, 2004, Wiley India Pvt. Ltd.
- Elements of Solid State Physics, J.P. Srivastava, 4th Edition, 2015, Prentice-Hall of India
- Introduction to Solids, Leonid V. Azaroff, 2004, Tata Mc-Graw Hill
- Solid State Physics, N.W. Ashcroft and N.D. Mermin, 1976, Cengage Learning
- Solid-state Physics, H. Ibach and H. Luth, 2009, Springer
- Solid State Physics, Rita John, 2014, McGraw Hill
- Elementary Solid State Physics, 1/e M. Ali Omar, 1999, Pearson India
- Solid State Physics and Electronics, A.B.Gupta and N.Islam, Books and Allied (P) Ltd.
- Quantum Mechanics, Statistical Machanics and Solid State Physics, 2010, S.Chand & Company.
- Solid State Physics, M.A. Wahab, 2011, Narosa Publications.

Solid State Physics (Practical)

Paper: PHS-A-CC-5-12-P

Credits: 2

List of Practicals

- 1. To study PE hysteresis of ferroelectric crystal.
- 2. To study BH hysteresis of ferromagnetic material.
- 3. Measurement of susceptibility of paramagnetic solution by Quink"s tube method.
- 4. Measurement of magnetic susceptibility of solids.
- 5. Determination of variation of dielectric constant with frequency.
- 6. Measurement of hall voltage by four probe method.
- 7. To study temperature coefficient of a semiconductor (NTC thermistor).

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal.
- Elements of Solid State Physics, J.P. Srivastava, 2nd Ed., 2006, Prentice-Hall of India.

2.13 Semester - 6: Electromagnetic Theory

Electromagnetic Theory (Theory)

Paper: PHS-A-CC-6-13-TH

- 1. Maxwell Equations
 - (a) Review of Maxwell's equations. Vector and Scalar Potentials. Gauge Transformations: Lorentz and Coulomb Gauge. Boundary Conditions at Interface between Different Media. Wave Equations. Plane Waves in Dielectric Media. Poynting Theorem and Poynting Vector. Electromagnetic (EM) Energy Density. Physical Concept of Electromagnetic Field Energy Density, Momentum Density and Angular Momentum Density.
- 2. EM Wave Propagation in Unbounded Media
 - (a) Plane EM waves through vacuum and isotropic dielectric medium, transverse nature of plane EM waves, refractive index and dielectric constant, wave impedance. Propagation through conducting media, relaxation time, skin depth. Wave propagation through dilute plasma, electrical conductivity of ionized gases, plasma frequency, refractive index, skin depth, application to propagation through ionosphere.
- 3. EM Wave in Bounded Media
 - (a) Boundary conditions at a plane interface between two media. Reflection & Refraction of plane waves at plane interface between two dielectric media-Laws of Reflection & Refraction. Fresnel's formulae for perpendicular & parallel polarization cases, Brewster's law. Reflection & Transmission coefficients. Total internal reflection, evanescent waves. Metallic reflection (normal Incidence).

- 4. Electromagnetic origin of Wave Optics
 - (a) Kirchhoff's Integral Theorem, Fresnel-Kirchhoff's Integral formula. (Qualitative discussion only)
 - (b) Description of Linear, Circular and Elliptical Polarization. Origin of Double-Refraction: Propagation of E.M. Waves in Anisotropic Media. Symmetric Nature of Dielectric Tensor. Fresnel's Formula.
- 5. Polarization in uniaxial crystals
 - (a) Uniaxial and Biaxial Crystals. Light Propagation in Uniaxial Crystal. Double Refraction. Polarization by Double Refraction. Nicol Prism. Ordinary & extraordinary refractive indices. Phase Retardation Plates: Quarter-Wave and Half-Wave Plates. Production & analysis of polarized light. Babinet Compensator and its Uses.
- 6. Rotatory polarization.
 - (a) Optical Rotation. Biot's Laws for Rotatory Polarization. Fresnel's Theory of optical rotation. Calculation of angle of rotation. Experimental verification of Fresnel's theory. Specific rotation. Laurent's half-shade and biquartz polarimeters.

- Introduction to Electrodynamics, D.J. Griffiths, 3rd Ed., 1998, Benjamin Cummings.
- Optics, E. Hecht, 2016, Pearson.
- Elements of Electromagnetics, M.N.O. Sadiku, 2001, Oxford University Press.
- Introduction to Electromagnetic Theory, T.L. Chow, 2006, Jones & Bartlett Learning
- Fundamentals of Electromagnetics, M.A.W. Miah, 1982, Tata McGraw Hill
- Electromagnetic field Theory, R.S. Kshetrimayun, 2012, Cengage Learning
- Engineering Electromagnetic, Willian H. Hayt, 8th Edition, 2012, McGraw Hill.
- Electromagnetic Field Theory for Engineers & Physicists, G. Lehner, 2010, Springer

Additional Books for Reference

- Electromagnetic Fields & Waves, P.Lorrain & D.Corson, 1970, W.H.Freeman & Co.
- Electromagnetics, J.A. Edminster, Schaum Series, 2006, Tata McGraw Hill.
- Electromagnetic field theory fundamentals, B. Guru and H. Hiziroglu, 2004, Cambridge University Press

Electromagnetic Theory (Practical)

Paper: PHS-A-CC-6-13-P

Credits: 2

List of Practicals

- 1. To determine Brewster's angle for air-glass interface using a prism.
- 2. To study Fresnels law by the reflection on the surface of a prism.
- 3. To verify the Malus law using a pair of polaroids.
- 4. To study the specific rotation of opticlly active solution using polarimeter.
- 5. Determination of wavelength and velocity of ultrasonic waves ion a liquid (kerosene, Xylene etc).
- 6. To analyze elliptically polarized light by using babinate compensator.
- 7. To determine dispersive power and resolving power of a plane diffraction grating.

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal
- Electromagnetic Field Theory for Engineers & Physicists, G. Lehner, 2010, Springer

2.14 Semester - 6: Statistical Mechanics

Statistical Mechanics (Theory)

Paper: PHS-A-CC-6-14-TH

- 1. Classical Statistical Mechanics
 - (a) Macrostate & Microstate, Elementary Concept of Ensemble and Ergodic Hypothesis. Phase Space.
 - (b) Microcanonical ensemble, Postulate of Equal a-priori probabilities. Boltzmann hypothesis: Entropy and Thermodynamic Probability.
 - (c) Canonical ensemble, Partition Function, Thermodynamic Functions of an Ideal Gas, Classical Entropy Expression, Gibbs Paradox.
 - (d) Sackur Tetrode equation, Law of Equipartition of Energy (with proof)
 Applications to Specific Heat and its Limitations. Thermodynamic Functions of a Two-Energy Level System. Negative Temperature.
 - (e) Grand canonical ensemble and chemical potential.
- 2. Classical Theory of Radiation
 - (a) Properties of Thermal Radiation. Blackbody Radiation. Pure temperature dependence. Kirchhoff's law. Stefan-Boltzmann law: Thermodynamic proof. Radiation Pressure. Wien's Displacement law. Wien's Distribution Law. Rayleigh-Jean's Law. Ultraviolet Catastrophe.
- 3. Quantum Theory of Radiation
 - (a) Spectral Distribution of Black Body Radiation. Planck's Quantum Postulates. Planck's Law of Blackbody Radiation: Experimental Verification. Deduction of (1) Wien's Distribution Law, (2) Rayleigh-Jeans Law, (3) Stefan-Boltzmann Law, (4) Wien's Displacement law from Planck's law.
- 4. Bose-Einstein Statistics:
 - (a) B-E distribution law. Thermodynamic functions of a strongly Degenerate Bose Gas, Bose Einstein condensation, properties of liquid He (qualitative description), Radiation as a photon gas and Thermodynamic functions of photon gas. Bose derivation of Planck's law.
- 5. Fermi-Dirac Statistics:
 - (a) Fermi-Dirac Distribution Law. Thermodynamic functions of a Completely and strongly Degenerate Fermi Gas, Fermi Energy, Electron gas in a Metal, Specific Heat of Metals.

- Statistical Mechanics, R.K. Pathria, Butterworth Heinemann: 2nd Ed., 1996, Oxford University Press.
- Statistical Physics, Berkeley Physics Course, F. Reif, 2008, Tata McGraw-Hill.
- Statistical and Thermal Physics, S. Lokanathan and R.S. Gambhir. 1991, Prentice Hall.
- Thermodynamics, Kinetic Theory and Statistical Thermodynamics, Francis W. Sears and Gerhard L. Salinger, 1986, Narosa.
- Modern Thermodynamics with Statistical Mechanics, Carl S. Helrich, 2009, Springer.
- An Introduction to Statistical Mechanics & Thermodynamics, R.H. Swendsen, 2012, Oxford Univ. Press.
- Statistical Mechanics an elementary outline, A. Lahiri, 2008, Universities Press.

Statistical Mechanics (Practical)

Paper: PHS-A-CC-6-14-P

Credits: 2

List of Practicals

- 1. Computational analysis of the behavior of a collection of particles in a box that satisfy Newtonian mechanics and interact via the Lennard-Jones potential, varying the total number of particles N and the initial conditions:
 - (a) Study of local number density in the equilibrium state (i) average;(ii) fluctuations
 - (b) Study of transient behavior of the system (approach to equilibrium)
 - (c) Relationship of large N and the arrow of time
 - (d) Computation of the velocity distribution of particles for the system and comparison with the Maxwell velocity distribution
 - (e) Computation and study of mean molecular speed and its dependence on particle mass
 - (f) Computation of fraction of molecules in an ideal gas having speed near the most probable speed
- 2. Computation of the partition function $Z(\beta)$ for examples of systems with a finite number of single particle levels (e.g., 2 level, 3 level, etc.) and a finite number of non-interacting particles N under Maxwell-Boltzmann, Fermi-Dirac and Bose- Einstein statistics:

- (a) Study of how $Z(\beta)$, average energy $\langle E \rangle$, energy fluctuation ΔE , specific heat at constant volume C_v , depend upon the temperature, total number of particles N and the spectrum of single particle states.
- (b) Ratios of occupation numbers of various states for the systems considered above
- (c) Computation of physical quantities at large and small temperature T and comparison of various statistics at large and small temperature T.
- 3. Plot Planck's law for Black Body radiation and compare it with Raleigh-Jeans Law at high temperature and low temperature.
- 4. Plot Specific Heat of Solids (a) Dulong-Petit law, (b) Einstein distribution function, (c) Debye distribution function for high temperature and low temperature and compare them for these two cases.
- 5. Plot the following functions with energy at different temperatures
 - (a) Maxwell-Boltzmann distribution
 - (b) Fermi-Dirac distribution
 - (c) Bose-Einstein distribution

- Elementary Numerical Analysis, K.E.Atkinson, 3 rd Edn . 2007, Wiley India Edition
- Statistical Mechanics, R.K. Pathria, Butterworth Heinemann: 2nd Ed., 1996, Oxford University Press.
- Introduction to Modern Statistical Mechanics, D. Chandler, Oxford University Press, 1987
- Thermodynamics, Kinetic Theory and Statistical Thermodynamics, Francis W. Sears and Gerhard L. Salinger, 1986, Narosa.
- Modern Thermodynamics with Statistical Mechanics, Carl S. Helrich, 2009, Springer
- Statistical and Thermal Physics with computer applications, Harvey Gould and Jan Tobochnik, Princeton University Press, 2010.
- Simulation of ODE/PDE Models with MATLAB, OCTAVE and SCILAB: Scientific and Engineering Applications: A. Vande Wouwer, P. Saucez, C. V. Fernandez. 2014 Springer ISBN: 978-3319067896

3 Syllabi for Discipline Specific Elective Courses (Honours)

3.1 DSE-A1: Advanced Mathematical Methods - I

Advanced Mathematical Methods - I - (Theory)

Paper: PHS-A-DSE-A1-TH Credits: 5 (+1 for Tutorial)

- 1. Preliminaries
 - (a) Set, Logical Connectivities, Proof and Function: Notion of set and basic set algebra (Venn diagram should not be used to do set algebra). Definition of OR, AND, NOT and IF-THEN. Example of direct proof, proof by contrapositivity and contradiction. Vacuous proof (as for example null set is a subset of every set).
 - (b) Definition of function (distinction should be made between function f and the value of the function f(x) of function f at x). For real or complex valued function definition of zeros of a function and Zero function. Equality of functions. Example of function. Constant function (Mention the fact that function is neither a dependence nor an expression), Dirichlet function (Mention the fact that it does not have any graph) and other examples of standard real and complex valued functions.
 - (c) Mathematical Induction (Mention that it requires proof) and its applications.
- 2. Real Numbers and Complex Numbers
 - (a) Axiomatic description of real number, Few applications of axioms to show its power (as for example prove a.0 = 0, a(-b) = -(ab) 1 > 0, etc.). Distinction between real or finite number and infinity and also between undefined quantity (as for example a/0) and infinity. Complex numbers (Mention the fact that they are two dimensional vectors as Real numbers are one dimensional vectors and unlike real numbers complex numbers do not admit ordering and finally beyond complex number there is only one infinity not two).
 - (b) Sequence, Series and Power Series: Definition of sequence and series (Mention the fact that sums in the series are not real sum but limit of finite sums; they actually mimic some of the properties of actual sum). Limit superior and Limit inferior of a sequence. Convergence of a sequence (Stress should be given on ε N definition of convergence and show proof of few elementary sequences directly from ε N definition), Power series, Example of power series, Infinite G.P. series, Uniform convergence of power series, example and Weierstrass M-test (Also mention the fact for uniform convergence of a power series we can differentiate or integrate a power series term by

term), Zero power series and equality of two power series. Radius of convergence of a power series mentioning its relation with the Limit Superior of its coefficients.

- 3. Basics of Calculus
 - (a) Differential Calculus in one variable: Definition of limit (Stress should be given on epsilon-delta definition and show proof of some standard limits using epsilon-delta definition, also mention the fact that limiting value of a function when x approaches a does not depend at all on f(a)). Definition of Continuity (Mention the fact that if function is continuous at a and f(a) > 0, then there exists an open interval around a where function is entirely positive). Definition of derivative (Emphasis given on the first principle and mention the fact that for any arbitrary curve derivative actually defines tangent i.e. we define derivative via tangent). Rolle's Theorem and Mean value Theorem of Differential Calculus (with proof) and its application.
 - (b) Integral Calculus in one variable: Definition of Anti derivative and Riemann (or definite) integral. Fundamental Theorem of Integral Calculus (With proof, mention the fact that although they are different, but we use one of them to calculate another). Riemann integral defines area enclosed by arbitrary curve. Mention sufficient conditions for integrability (as for example continuity or piece-wise continuity or even when set of points of discontinuity is countable, the function is integrable). Mean Value Theorem of Integral Calculus (with proof) and its applications.
- 4. Linear Algebra.
 - (a) Abstract Systems. Binary Operations and Relations. Introduction to Groups and Fields. Vector Spaces over Real and Complex Fields. Subspaces. Homomorphism and Isomorphism of Vector Spaces. Linear Independence and Dependence of Vectors. Completeness of a set of vectors. Basis of a vector space. Replacement theorem uniqueness of cardinality of different bases Dimensions of a Vector Space. Change of basis. Isomorphism of every n dimensional vector space with \mathbb{C}^n basis dependence of this isomorphism.
 - (b) Inner products Space. Norm (defined in terms of inner product). Orthogonality. Orthogonal and Orthonormal sets. Orthonormal basis. Change of orthonormal basis. Gram-Schmidt orthogonalization – proof that an orthonormal basis will always exist. Schwarz inequality. Linear functionals on a vector space. Addition and Multiplication by scalars on linear functionals. Dual Space. Bra and Ket vectors and the Bra-Ket notation. Dual Basis. Construction of bra from ket and vice-versa.
 - (c) Linear Transformations and Linear Operators. Consequences of linearity: Specification of the action of an operator on a basis defines the

action on the whole space - Representation of Linear Operators by Matrices. Transformation of representations under change of basis. Algebra of Linear Operators. Singular and Non-singular operators. The Adjoint or Hermitian conjugate of an operator. Hermitian, Orthogonal and Unitary operators. Projection operators.

- (d) Eigenvalues and Eigenvectors of an operator. Degeneracy and Eigen spaces. Algebraic and Geometric multiplicity of eigenvalues. Diagonalization and Diagonalizability. Normal operators. Eigen properties of Hermitian and Unitary operators. Commuting operators and its relation to simultaneous diagonalizability. Complete sets of commuting operators.
- (e) Tensor Products of Inner product spaces. Tensor products of vectors and operators. Extensions of operators to product spaces.

Reference Books

- Calculus Volume I and II, Tom Apostol, John Wiley and Sons Inc.
- Bartle and Sherbert, Introduction to Real Analysis, Third edition, Wiley-India |item Complex Analysis, V.L Ahlfors, McGraw-Hill Inc.
- Finite Dimensional Vector Spaces, P. R. Halmos, Springer.
- Introduction To Matrices And Linear Transformations, D. T. Finkbeiner, Courier Corporation.
- Linear Algebra, S. Lipschutz and M.L.Lipson, Schaums Outline Series, 2009 McGraw Hill.

3.2 DSE-A1: Communication Electronics

Communication Electronics - (Theory)

Paper: PHS-A-DSE-A1-TH

- 1. Electronic communication
 - (a) Introduction to communication means and modes. Need for modulation. Block diagram of an electronic communication system. Brief idea of frequency allocation for radio communication system in India (TRAI). Electromagnetic communication spectrum, band designations and usage. Channels and base-band signals. Concept of Noise, signal-to-noise (S/N) ratio.
- 2. Analog Modulation
 - (a) Amplitude Modulation, modulation index and frequency spectrum. Generation of AM (Emitter Modulation), Amplitude Demodulation
(diode detector), Concept of Single side band generation and detection. Frequency Modulation (FM) and Phase Modulation (PM), modulation index and frequency spectrum, equivalence between FM and PM, Generation of FM using VCO, FM detector (slope detector), Qualitative idea of Super heterodyne receiver.

- 3. Analog Pulse Modulation
 - (a) Channel capacity, Sampling theorem, Basic Principles- PAM, PWM, PPM, modulation and detection technique for PAM only, Multiplexing.
- 4. Digital Pulse Modulation
 - (a) Need for digital transmission, Pulse Code Modulation, Digital Carrier Modulation Techniques, Sampling, Quantization and Encoding. Concept of Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK).
- 5. Introduction to Communication and Navigation systems:
 - (a) Satellite Communication-Introduction, need, Geosynchronous satellite orbits geostationary satellite advantages of geostationary satellites. Satellite visibility, transponders (C - Band), path loss, ground station, simplified block diagram of earth station. Uplink and downlink.
 - (b) Mobile Telephony System Basic concept of mobile communication, frequency bands used in mobile communication, concept of cell sectoring and cell splitting, SIM number, IMEI number, need for data encryption, architecture (block diagram) of mobile communication network, idea of GSM, CDMA, TDMA and FDMA technologies, simplified block diagram of mobile phone handset, 2G, 3G and 4G concepts (qualitative only). GPS navigation system (qualitative idea only).

- Electronic Communications, D. Roddy and J. Coolen, Pearson Education India.
- Advanced Electronics Communication Systems- Tomasi, 6th edition, Prentice Hall.
- Electronic Communication systems, G. Kennedy, 3rd Edn, 1999, Tata McGraw Hill.
- Principles of Electronic communication systems Frenzel, 3rd edition, McGraw Hill

- Communication Systems, S. Haykin, 2006, Wiley India
- Electronic Communication system, Blake, Cengage, 5th edition.
- Wireless communications, Andrea Goldsmith, 2015, Cambridge University Press

Communication Electronics - (Practical)

Paper: PHS-A-DSE-A1-P

Credits: 2

List of Practicals

- 1. To design an Amplitude Modulator using Transistor
- 2. To study envelope detector for demodulation of AM signal
- 3. To study FM Generator and Detector circuit
- 4. To study AM Transmitter and Receiver
- 5. To study FM Transmitter and Receiver
- 6. To study Time Division Multiplexing (TDM)
- 7. To study Pulse Amplitude Modulation (PAM)

Reference Books

- Electronic Communication systems, G. Kennedy, 1999, Tata McGraw Hill.
- Electronic Communication system, Blake, Cengage, 5th edition.

3.3 DSE-A2: Astronomy and Astrophysics

Astronomy and Astrophysics - (Theory)

Paper: PHS-A-DSE-A2-TH Credits: 5 (+1 for Tutorial)

- 1. Astronomical Scales Astronomical Distance.
 - (a) Mass and Time, Scales, Brightness, Radiant Flux and Luminosity, Measurement of Astronomical Quantities Astronomical Distances, Stellar Radii, Masses of Stars, Stellar Temperature. Basic concepts of positional astronomy: Celestial Sphere, Geometry of a Sphere, Spherical Triangle, Astronomical Coordinate Systems, Geographical Coordinate Systems, Horizon System, Equatorial System, Diurnal Motion of the Stars, Conversion of Coordinates. Measurement of Time, Sidereal Time, Apparent Solar Time, Mean Solar Time, Equation of Time, Calendar. Basic Parameters of Stars: Determination

of Distance by Parallax Method; Brightness, Radiant Flux and Luminosity, Apparent and Absolute magnitude scale, Distance Modulus; Determination of Temperature and Radius of a star; Determination of Masses from Binary orbits; Stellar Spectral Classification, Hertzsprung-Russell Diagram.

- 2. Astronomical techniques
 - (a) Basic Optical Definitions for Astronomy (Magnification Light Gathering Power, Resolving Power and Diffraction Limit, Atmospheric Windows), Optical Telescopes (Types of Reflecting Telescopes, Telescope Mountings, Space Telescopes, Detectors and Their Use with Telescopes (Types of Detectors, detection Limits with Telescopes).
- 3. Physical principles
 - (a) Gravitation in Astrophysics (Virial Theorem, Newton versus Einstein), Systems in Thermodynamic Equilibrium.
- 4. The sun and solar family
 - (a) The sun (Solar Parameters, Solar Photosphere, Solar Atmosphere, Chromosphere. Corona, Solar Activity, Basics of Solar Magnetohydrodynamics. Helioseismology). The solar family (Solar System: Facts and Figures, Origin of the Solar System: The Nebular Model, Tidal Forces and Planetary Rings, Extra-Solar Planets. Stellar spectra and classification Structure (Atomic Spectra Revisited, Stellar Spectra, Spectral Types and Their Temperature Dependence, Black Body Approximation, H R Diagram, Luminosity Classification). Main sequence, red giants and white dwarfs, Chandrashekhar mass limit, possibility of Neutron star.
- 5. The milky way
 - (a) Basic Structure and Properties of the Milky Way, Nature of Rotation of the Milky Way (Differential Rotation of the Galaxy and Oort Constant, Rotation Curve of the Galaxy and the Dark Matter, Nature of the Spiral Arms), Stars and Star Clusters of the Milky Way, Properties of and around the Galactic Nucleus.
- 6. Galaxies
 - (a) Galaxy Morphology, Hubble's Classification of Galaxies, Elliptical Galaxies (The Intrinsic Shapes of Elliptical, de Vaucouleurs Law, Stars and Gas). Spiral and Lenticular Galaxies (Bulges, Disks, Galactic Halo) The Milky Way Galaxy, Gas and Dust in the Galaxy, Spiral Arms.

- 7. Large scale structure & expanding universe
 - (a) Cosmic Distance Ladder (An Example from Terrestrial Physics, Distance Measurement using Cepheid Variables), Hubble's Law (Distance-Velocity Relation), Clusters of Galaxies (Virial theorem and Dark Matter).

- Modern Astrophysics, B.W. Carroll & D.A. Ostlie, Addison-Wesley Publishing Co.
- Introductory Astronomy and Astrophysics, M. Zeilik and S.A. Gregory, 4 th Edition, Saunders College Publishing.
- The physical universe: An introduction to astronomy, F.Shu, Mill Valley: University Science Books.
- Fundamentals of Astronomy (Fourth Edition), H. Karttunen et al. Springer
- K.S. Krishnasamy, 'Astro Physics a modern perspective,' Reprint, New Age International (p) Ltd, New Delhi,2002.
- Baidyanath Basu, 'An introduction to Astro physics', Second printing, Prentice - Hall of India Private limited, New Delhi, 2001.
- Textbook of Astronomy and Astrophysics with elements of cosmology, V.B. Bhatia, Narosa Publication

3.4 DSE-A2: Advanced Dynamics

Advanced Dynamics - (Theory)

Paper: PHS-A-DSE-A2-TH

- 1. Small Amplitude Oscillations
 - (a) Minima of potential energy and points of stable equilibrium, expansion of the potential energy around a minimum, small amplitude oscillations about the minimum, normal modes of oscillations example of N identical masses connected in a linear fashion to (N -1) identical springs.
- 2. Dynamical Systems
 - (a) Definition of a continuous first order dynamical system. The idea of phase space, flows and trajectories. Simple mechanical systems as dynamical systems: the free particle, particle under uniform gravity, simple and damped harmonic oscillator, pendulum. Sketching flows and trajectories in phase space; sketching variables as functions of time, relating the equations and pictures to the underlying

physical intuition. Other examples of dynamical systems – In Biology: Population models e.g. exponential growth and decay, logistic growth, species competition, predator-prey dynamics, simple genetic circuits In Chemistry: Rate equations for chemical reactions e.g. auto catalysis, bistability In Economics: Examples from game theory. Illustrative examples from other disciplines. Fixed points, attractors, stability of fixed points, basin of attraction, notion of qualitative analysis of dynamical systems, with applications to the above examples. Computing and visualizing trajectories on the computer using software packages. Discrete dynamical systems. The logistic map as an example.

- 3. Introduction to Chaos and Fractals
 - (a) Examples of 2-dimensional billiard, Projection of the trajectory on momentum space. Sinai Billiard and its variants. Computational visualization of trajectories in the Sinai Billiard. Randomization and ergodicity in the divergence of nearby phase space trajectories, and dependence of time scale of divergence on the size of obstacle. Electron motion in mesoscopic conductors as a chaotic billiard problem. Other examples of chaotic systems; visualization of their trajectories on the computer. Self-similarity and fractal geometry: Fractals in nature - trees, coastlines, earthquakes, etc. Need for fractal dimension to describe self-similar structure. Deterministic fractal vs. self-similar fractal structure. Fractals in dynamics – Serpinski gasket and DLA. Chaos in nonlinear finite-difference equations- Logistic map: Dynamics from time series. Parameter dependence- steady, periodic and chaos states. Cobweb iteration. Fixed points. Defining chaos- aperiodic, bounded, deterministic and sensitive dependence on initial conditions. Period- Doubling route to chaos. Nonlinear time series analysis and chaos characterization: Detecting chaos from return map. Power spectrum, autocorrelation, Lyapunov exponent, correlation dimension.

- Classical Mechanics: A Course of Lectures. A.K. Raychaudhuri, 1983, Oxford University Press.
- Mechanics, L. D. Landau and E. M. Lifshitz, 1976, Pergamon.
- Classical Mechanics, P.S. Joag, N.C. Rana, 1st Edn., McGraw Hall.
- Nonlinear Dynamics and Chaos, S.H. Strogatz, Levant Books, Kolkata, 2007
- Understanding Nonlinear Dynamics, Daniel Kaplan and Leon Glass, Springer. Classical Mechanics, H.Goldstein, C.P. Poole, J.L. Safko, 3rd Edn. 2002, Pearson Education.

Advanced Dynamics - (Practical)

Paper: PHS-A-DSE-A2-P

Credits: 2

List of Practicals

- 1. To draw the phase portrait of damped harmonic oscillator using numerical techniques.
- 2. To draw the phase portrait of a pendulum with different values of energy using numerical techniques.
- 3. To study logistic growth population model for different parameter values drawing cobweb diagrams (few steps).
- 4. To study the phenomenon of chaos in logistic growth model using simple computer programs and to estimate the corresponding Lyapunov exponent.
- 5. Computational visualization of trajectories in the Sinai Billiard.
- 6. Visualization of fractal nature of the chaotic attractors in logistic map by numerically generating the orbit diagram fractal.
- 7. Computational visualization of formations of a self-similar fractal structure such as middle third cantor set.

Suggested Demonstrations in Class

- 1. Motion of a pendulum with large amplitude and the dependence of its time period on the amplitude.
- 2. Motion of a double pendulum with small amplitudes and large amplitudes and appearance of its irregular (chaotic) behaviour.
- 3. Computational visualization of fractal formations of Fractals in nature -trees, coastlines, earthquakes.

- Nonlinear Dynamics and Chaos, Steven H. Strogatz, Levant Books, Kolkata, 2007.
- Chaos An Introduction to Dynamical Systems, K. T. Alligood, T. D. Sauer and J. A. Yorke, Springer.
- Understanding Nonlinear Dynamics, Daniel Kaplan and Leon Glass, Springer.
- Simulation of ODE/PDE Models with MATLAB, OCTAVE and SCILAB: Scientific and Engineering Applications: A. Vande Wouwer, P. Saucez, C. V. Fernández. 2014 Springer ISBN: 978-3319067896

- Scilab by example : M. Affouf, 2012, ISBN: 978-1479203444
- Scilab Image Processing : L.M.Surhone . 2010, Betascript Pub., ISBN: 978-6133459274

3.5 DSE-B1: Advanced Mathematical Methods - II

Advanced Mathematical Methods - II - (Theory)

Paper: PHS-A-DSE-B1-TH Credits: 5 (+1 for Tutorial)

1. Tensors

- (a) Cartesian Tensors. Transformation of Co-ordinates. Einstein's Summation Convention. Relation between Direction Cosines. Tensors. Algebra of Tensors. Sum, Difference and Product of Two Tensors. Contraction. Quotient Law of Tensors. Symmetric and Anti- symmetric Tensors. Invariant Tensors: Kronecker and Alternating Tensors. Association of Antisymmetric Tensor of Order Two and Vectors. Vector Algebra and Calculus using Cartesian Tensors: Scalar and Vector Products, Scalar and Vector Triple Products. Differentiation. Gradient, Divergence and Curl of Tensor Fields. Vector Identities. Isotropic Tensors. Tensorial Character of Physical Quantities. Moment of Inertia Tensor. Stress and Strain Tensors: Symmetric Nature. Elasticity Tensor. Generalized Hooke's Law. Electric Susceptibility tensor.
- (b) General Tensors. Transformation of Co-ordinates. Minkowski Space. Contravariant & Covariant Vectors. Contravariant, Covariant and Mixed Tensors. Kronecker Delta and Permutation Tensors. Algebra of Tensors. Sum, Difference & Product of Two Tensors. Contraction. Quotient Law of Tensors. Symmetric and Anti- symmetric Tensors. Metric Tensor.

2. Group Theory

- (a) Groups: Elementary properties of groups, uniqueness of Identity, Inverse, Rearrangement theorem. Conjugate relations, Classes, Subgroup, Invariant Subgroups, Cosets, Coset multiplication, Factor Groups. Centre of a group. Cyclic group, Permutation groups and Transformation Groups. Homomorphism and Isomorphism of groups, Kernel.
- (b) Matrix Representations of Groups Reducible and Irreducible representations. Schur's lemma. Orthogonality theorems. Character tables and their uses.
- (c) Lie Groups: Definition using metric associated with faithful finite dimensional matrix representation. Connected component and Connected Lie group. Compact Lie group.

- (d) Lie Algebra: Definition, Lie Product and Structure constants. Lie Subalgebra, Invariant Lie Subalgebra. Homomorphism and Isomorphism of Lie Algebras. Representations of Lie Algebras.
- (e) Connection of Lie Groups with Lie Algebra. The matrix exponential and its properties. Fundamental theorem of Lie Algebra. Analytic curves and Tangent vectors in Lie Groups. One parameter Subgroups and the exponential map connection. Special cases of connected and compact Lie groups. Constructing representations of Lie Algebras using corresponding analytic representations of Lie Groups.
- (f) SO(3), SU(2) and SU(3) groups as examples.

- Mathematical Methods for Physicists: Weber and Arfken, 2005, Academic Press.
- Mathematical Methods for Physicists: A Concise Introduction: Tai L. Chow, 2000, Cambridge Univ. Press.
- Elements of Group Theory for Physicists by A. W. Joshi, 1997, John Wiley.
- Group Theory and its Applications to Physical Problems by Morton Hamermesh, 1989, Dover.
- Group Theory in Physics, Volume I & II, J.F.Cornwell, Academic Press, 1984.
- Introduction to Mathematical Physics: Methods & Concepts: Chun Wa Wong, 2012, Oxford University Press.

3.6 DSE-B1: Nuclear and Particle Physics

Nuclear and Particle Physics - (Theory)

Paper: PHS-A-DSE-B1-TH Credits: 5 (+1 for Tutorial)

- 1. Recapitulation of general properties of nuclei, nuclear models and radioactivity.
- 2. Nuclear Reactions
 - (a) Types of Reactions, Conservation Laws, kinematics of reactions, Qvalue, reaction rate, reaction cross section, Concept of compound and direct Reaction, resonance reaction, Coulomb scattering (Rutherford scattering).

- 3. Interaction of Nuclear Radiation with matter
 - (a) Energy loss due to ionization (Bethe- Block formula), energy loss of electrons, Cerenkov radiation. Gamma ray interaction through matter, photoelectric effect, Compton scattering, pair production, neutron's interaction with matter.
- 4. Detector for Nuclear Radiations
 - (a) Gas detectors: estimation of electric field, mobility of particle, for ionization chamber and GM Counter. Basic principle of Scintillation Detectors and construction of photo-multiplier tube (PMT). Semiconductor Detectors (Si and Ge) for charge particle and photon detection (concept of charge carrier and mobility), neutron detector.
- 5. Particle Accelerators
 - (a) Accelerator facility available in India: Van-de Graaff generator (Tandem accelerator), Linear accelerator, Cyclotron, Synchrotrons.
- 6. Particle Physics
 - (a) Fundamental particles and their families. Fundamental particle-interactions and their basic features. Symmetries and Conservation Laws: energy and momentum, angular momentum, parity, baryon number, Lepton number, Isospin, Strangeness and charm, concept of quark model, color quantum number and gluons. Quark structure of hadrons.

- Introductory nuclear Physics by Kenneth S. Krane (Wiley India Pvt. Ltd., 2008).
- Concepts of nuclear physics by Bernard L. Cohen. (Tata Mcgraw Hill, 1998).
- Introduction to the physics of nuclei & particles, R.A. Dunlap. (Thomson Asia, 2004).
- Introduction to High Energy Physics, D.H. Perkins, Cambridge Univ. Press.
- Introduction to Elementary Particles, D. Griffith, John Wiley & Sons.
- Quarks and Leptons, F. Halzen and A.D. Martin, Wiley India, New Delhi.
- Basic ideas and concepts in Nuclear Physics An Introductory Approach by K. Heyde (IOP- Institute of Physics Publishing, 2004).
- Radiation detection and measurement, G.F. Knoll (John Wiley & Sons, 2000).

- Physics and Engineering of Radiation Detection, Syed Naeem Ahmed (Academic Press, Elsevier, 2007).
- Theoretical Nuclear Physics, J.M. Blatt & V.F.Weisskopf (Dover Pub.Inc., 1991).

3.7 DSE-B2: General Relativity

General Relativity - (Theory)

Paper: PHS-B-DSE-B2-TH

Credits: 5 (+1 for Tutorial)

- 1. Review of Special Relativity in Tensor Notation.
- 2. Non-Euclidean Geometry
 - (a) Manifold Working definition only.
 - (b) Affine Space
 - Parallel transport, Affine Connection and Affine Space. Affine flatness. Covariant derivative of a vector, tensor. Riemann Tensor. Vanishing Riemann Tensor as a characterization of affine flatness (statement only) - Riemann Tensor as an intrinsic characterization of curvature in Affine space. Affine geodesics.
 - (c) Riemann space
 - i. Metric and Riemann Space. Metric flatness.
 - ii. Riemann space with Affine Connection: Demonstration that requirement of preservation of lengths and angles under parallel transport in a Riemann space leads to a unique Connection called the Metric Connection or Christoffel symbols. Vanishing covariant derivative of the metric as a necessary and sufficient condition for the the affine connection to be the metric connection.
 - iii. Metric Geodesics. Demonstrating that for the metric connection, metric geodesics are affine geodesics.
 - iv. Vanishing Riemann Tensor (now defined in terms of metric connection) as a characterization of metric flatness (statement only)
 Riemann Tensor as an intrinsic characterization of curvature also in Riemann space.
- 3. General Relativity
 - (a) Equation of motion (E.O.M.) of a test particle in force free motion in an inertial reference frame. The geodesic equation as E.O.M. of a test particle in force free motion in a non-inertial reference frame. Timelike and light-like geodesics. Observation that fictitious forces are encoded in the metric connection. Local indistinguishability of the fictitious forces from a gravitational field. Principle of equivalence. Principle of General Covariance.

- (b) Encoding gravity in the Metric Connection necessity of a curved space-time.
- (c) Reduction of the Geodesic equation of motion to Newton's E.O.M for static, weak fields (quasi-minkowski metric) in the non-relativistic limit by identification of a metric component with the gravitational potential. Gravitational Red Shift.
- (d) Einstein's Field Equations:
 - i. Requirements on the Field equations: i) it is a tensor equation ii) it admits minkowski metric as a particular solution iii) it is quasi-linear (linear in the 2nd derivative in metric) iii) it has the correct classical limit (i.e., it reduces to Poisson's equation).
 - ii. The Ricci tensor and the field equations in free space: Weakening the condition for gravity free space - vanishing Curvature tensor to vanishing Ricci tensor.
 - iii. Field equation in the presence of matter: Energy-momentum tensor as the source term. Problem with non-vanishing divergence of the Ricci Tensor. Ricci scalar, Einstein tensor and resolution of the divergence problem. Einstein's field equations and the Cosmological constant.
- 4. Consequences of Einstein's Equation
 - (a) Schwarzschild solution and the Schwarzschild metric (to be assumed). Recovery of Newtonian Gravity in the static, weak-field and non relativistic limit. Bending of stellar light near massive celestial objects. Schwarchild black hole and event horizon.

- The Classical Theory of Fields, L.D.Landau and E.M.Lifshitz, Butterworth-Heinemann.
- Introduction to General Relativity, R. Adler, M. Bazin and M. Schiffer, McGraw-Hill Kogakusha Ltd.
- A first Course in General Relativity, B. Schutz, Cambridge University Press.
- Introducing Einstein's Relativity, Ray D'Inverno, Clarendon Press Oxford.

3.8 DSE-B2: Nano Materials and Applications

Nano Materials and Applications - (Theory)

Paper: PHS-A-DSE-B2-TH Credits: 5 (+1 for Tutorial)

- 1. Nanoscale Systems
 - (a) Length scales in physics, Nanostructures: 1D, 2D and 3D nanostructures (nanodots, thin films, nanowires, nanorods), Band structure and density of states of materials at nanoscale, Size Effects in nano systems, Quantum confinement: Applications of Schrödinger equation- Infinite potential well, potential step, potential box, quantum confinement of carriers in 3D, 2D, 1D nanostructures and its consequences.
- 2. Synthesis of Nanostructure Materials
 - (a) Top down and Bottom up approach, Photolithography. Ball milling. Gas phase condensation. Vacuum deposition. Physical vapor deposition (PVD): Thermal evaporation, E-beam evaporation, Pulsed Laser deposition. Chemical vapor deposition (CVD). Sol-Gel. Electro deposition. Spray pyrolysis. Hydrothermal synthesis. Preparation through colloidal methods. MBE growth of quantum dots.
- 3. Characterization
 - (a) X-Ray Diffraction. Optical Microscopy. Scanning Electron Microscopy. Transmission Electron Microscopy. Atomic Force Microscopy. Scanning Tunneling Microscopy.
- 4. Optical Properties
 - (a) Coulomb interaction in nanostructures. Concept of dielectric constant for nanostructures and charging of nanostructure. Quasi-particles and excitons. Excitons in direct and indirect band gap semiconductor nanocrystals. Quantitative treatment of quasi-particles and excitons, charging effects. Radiative processes: General formalizationabsorption, emission and luminescence. Optical properties of heterostructures and nanostructures.
- 5. Electron Transport
 - (a) Carrier transport in nanostructures. Coulomb blockade effect, thermionic emission, tunneling and hoping conductivity. Defects and impurities: Deep level and surface defects.

6. Applications

(a) Applications of nanoparticles, quantum dots, nanowires and thin films for photonic devices (LED, solar cells). Single electron transfer devices (no derivation). CNT based transistors. Nanomaterial Devices: Quantum dots heterostructure lasers, optical switching and optical data storage. Magnetic quantum well; magnetic dots -magnetic data storage. Micro Electromechanical Systems (MEMS), Nano Electromechanical Systems (NEMS).

- C.P. Poole, Jr. Frank J. Owens, Introduction to Nanotechnology (Wiley India Pvt. Ltd.).
- S.K. Kulkarni, Nanotechnology: Principles & Practices (Capital Publishing Company).
- K.K. Chattopadhyay and A. N. Banerjee, Introduction to Nanoscience and Technology (PHI Learning Private Limited).
- Richard Booker, Earl Boysen, Nanotechnology (John Wiley and Sons).
- M. Hosokawa, K. Nogi, M. Naita, T. Yokoyama, Nanoparticle Technology Handbook (Elsevier, 2007).
- Introduction to Nanoelectronics, V.V. Mitin, V.A. Kochelap and M.A. Stroscio, 2011, Cambridge University Press.
- Bharat Bhushan, Springer Handbook of Nanotechnology (Springer-Verlag, Berlin, 2004).

4 Syllabi for Skill Enhancement Courses (Honours)

4.1 SEC-A: Basics of Programming and Scientific Word Processing

Basics of Programming and Scientific Word Processing - (Theory)

Paper: PHS-A-SEC-A-TH

- 1. Elements of Programming
 - (a) An overview computers: History of computers, overview of architecture of computer, compiler, assembler, machine language, high level language, object oriented language, programming language.
 - (b) Algorithms and Flowcharts:
 - i. Algorithm definition, properties and development.
 - ii. Flowchart Concept of flowchart, symbols, guidelines, types.
- 2. Basic programming in C/FORTRAN
 - (a) Constants, Variables and Data types.
 - (b) Operation and Expressions Arithmetic operators, relational operators, logical operators.
 - (c) Managing input/output.
 - (d) Decision Making and Branching.
 - (e) Decision making and Looping.
 - (f) Arrays : One-dimension, two-dimension and multidimensional arrays, declaration of arrays, initialization of one and multi-dimensional arrays.
 - (g) User-defined Functions.
- 3. Visualization
 - (a) Introduction to graphical analysis and its limitations. Introduction to Gnuplot. importance of visualization of computational and computational data, basic Gnuplot commands: simple plots, plotting data from a file, saving and exporting, multiple data sets per file, physics with Gnuplot (equations, building functions, user defined variables and functions), Understanding data with Gnuplot.
- 4. Scientific word processing:
 - (a) Introduction to LaTeX TeX/LaTeX word processor, preparing a basic LaTeX file, Document classes, Preparing an input file for LaTeX, Compiling LaTeX File, LaTeX tags for creating different environments, Defining LaTeX commands and environments, Changing the type style, Symbols from other languages.

- (b) Equation representation: Formulae and equations, Figures and other floating bodies, Lining in columns- Tabbing and tabular environment, Generating table of contents Bibliography and citation, Making an index and glossary, List making environments,
- (c) Fonts, Picture environment and colors, errors.

- Introduction to Numerical Analysis, S.S. Sastry, 5th Edn., 2012, PHI Learning Pvt. Ltd.
- Computer Programming in Fortran 77". V. Rajaraman (Publisher: PHI).
- Schaum's Outline of Theory and Problems of Programming with Fortran, S Lipschutz and A Poe, 1986Mc-Graw Hill Book Co.
- Computational Physics: An Introduction, R.C. Verma, et al. New Age International Publishers, New Delhi(1999)
- E. Balagurnsamy, Programming in ANSI C, Tata McGraw Hill, 2004.
- C. Xavier, C-Language and Numerical Methods, New Age International.
- V. Rajaraman, Computer Oriented Numerical Methods, Prentice Hall of India, 1980.
- Gnuplot in action: understanding data with graphs, Philip K Janert, (Manning 2010).
- LaTeX-A Document Preparation System", Leslie Lamport (Second Edition, Addison- Wesley, 1994).

4.2 SEC-A: Electrical Circuits and Network Skills

Electrical Circuits and Network Skills - (Theory)

Paper: PHS-A-SEC-A-TH

- 1. Basic Electricity Principles
 - (a) Voltage, Current, Resistance, and Power. Ohm's law. Series, parallel, and series-parallel combinations. AC Electricity and DC Electricity. Familiarization with multimeter, voltmeter and ammeter.
- 2. Understanding Electrical Circuits
 - (a) Main electric circuit elements and their combination. Rules to analyze DC sourced electrical circuits. Current and voltage drop across the DC circuit elements. Single-phase and three-phase alternating current sources. Rules to analyze AC sourced electrical circuits. Real, imaginary and complex power components of AC source. Power factor. Saving energy and money.

- 3. Electrical Drawing and Symbols
 - (a) Drawing symbols. Blueprints. Reading Schematics. Ladder diagrams. Electrical Schematics. Power circuits. Control circuits. Reading of circuit schematics. Tracking the connections of elements and identify current flow and voltage drop.
- 4. Generators and Transformers
 - (a) DC Power sources. AC/DC generators. Inductance, capacitance, and impedance. Operation of transformers.
- 5. Electric Motors
 - (a) Single-phase, three-phase & DC motors. Basic design. Interfacing DC or AC sources to control heaters & motors. Speed & power of ac motor.
- 6. Solid-State Devices
 - (a) Resistors, inductors and capacitors. Diode and rectifiers. Components in Series or in shunt. Response of inductors and capacitors with DC or AC sources.
- 7. Electrical Protection
 - (a) Relays. Fuses and disconnect switches. Circuit breakers. Overload devices. Ground-fault protection.Page 97 Grounding and isolating. Phase reversal. Surge protection. Interfacing DC or AC sources to control elements (relay protection device)
- 8. Electrical Wiring
 - (a) Different types of conductors and cables. Basics of wiring Star and delta connection. Voltage drop and losses across cables and conductors. Instruments to measure current, voltage, power in DC and AC circuits. Insulation. Solid and stranded cable. Conduit. Cable trays. Splices: wirenuts, crimps, terminal blocks, split bolts, and solder. Preparation of extension board.

- A text book in Electrical Technology B L Theraja S Chand & Co.
- A text book of Electrical Technology A K Theraja.
- Performance and design of AC machines M G Say ELBS Edn.

4.3 SEC-B: Computer Algebra System & Figure Drawing Skill

Computer Algebra System & Figure Drawing Skill - (Theory)

Paper: PHS-A-SEC-B-TH

Credits: 2

- 1. Elementary symbolic computation using some computer algebra system (CAS) like Yacas or Maxima.
 - (a) Arithmetic and other operations on numbers,
 - (b) Calculus and elementary functions, Simplification of expressions, Solvers, Differential Equations.
 - (c) Linear Algebra
 - (d) Operations on polynomials
 - (e) List operations
 - (f) Predicates
 - (g) Input/output and plotting
 - (h) Probability and Statistics
 - (i) Numerical methods using CAS
 - (j) Physics specific applications
- 2. Figure generation using drawing tools like xfig/ latexdraw/ inkscape etc.
 - (a) Drawing lines with/without arrows with different line styles.
 - (b) Drawing curves with different line styles including brazier curves.
 - (c) Drawing different types of shapes including circle, ellipse, polygons etc.
 - (d) Changing figure properties like position, colour, orientation, size, shape, line properties, filling properties etc.
 - (e) Grouping and ungrouping of figures.
 - (f) Exporting the figure into different file formats.

Reference

- https://yacas.readthedocs.io/en/latest/reference manual/
- The Maxima Book; Paulo Ney de Souza Richard J. Fateman Joel Moses Cliff Yapp; http://maxima.sourceforge.net/docs/maximabook/maximabook-19-Sept-2004.pdf.
- Get Started With Maxima: https://www.whoishostingthis.com/resources/maxima/
- Xfig user manual: http://mcj.sourceforge.net/

- LaTeXDraw Manual: https://github.com/arnobl/latexdraw/wiki/Manual
- The Book of Inkscape: The Definitive Guide to the Free Graphics Editor (1st ed.), No Starch Press, p. 476, ISBN 1-59327-181-6
- https://www.youtube.com/watch?v=zUIOEXssTS

4.4 SEC-B: Renewable Energy and Energy Harvesting

Renewable Energy and Energy Harvesting - (Theory)

Paper: PHS-A-SEC-B-TH

- 1. Fossil fuels and Alternate Sources of energy
 - (a) Fossil fuels and nuclear energy, their limitation, need of renewable energy, non-conventional energy sources. An overview of developments in Offshore Wind Energy, Tidal Energy, Wave energy systems, Ocean Thermal Energy Conversion, solar energy, biomass, biochemical conversion, biogas generation, geothermal energy tidal energy, Hydroelectricity.
- 2. Solar energy
 - (a) Solar energy, its importance, storage of solar energy, solar pond, nonconvective solar pond, applications of solar pond and solar energy, solar water heater, flat plate collector, solar distillation, solar cooker, solar green houses, solar cell, absorption air conditioning. Need and characteristics of photovoltaic (PV) systems, PV models and equivalent circuits, and sun tracking systems.
- 3. Wind Energy harvesting
 - (a) Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines, Power electronic interfaces, and grid interconnection topologies.
- 4. Ocean Energy
 - (a) Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices. Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy, Osmotic Power, Ocean Bio-mass.
- 5. Geothermal Energy
 - (a) Geothermal Resources, Geothermal Technologies.
- 6. Hydro Energy
 - (a) Hydropower resources, hydropower technologies, environmental impact of hydro power sources.

- 7. Piezoelectric Energy harvesting
 - (a) Introduction, Physics and characteristics of piezoelectric effect, materials and mathematical description of piezoelectricity, Piezoelectric parameters and modeling piezoelectric generators, Piezoelectric energy harvesting applications, Human power
- 8. Electromagnetic Energy Harvesting
 - (a) Linear generators, physics mathematical models, recent applications
 - (b) Carbon captured technologies, cell, batteries, power consumption.
 - (c) Environmental issues and Renewable sources of energy, sustainability.

- Non-conventional energy sources G.D Rai Khanna Publishers, New Delhi.Solar energy M P Agarwal S Chand and Co. Ltd.
- Solar energy Suhas P Sukhative Tata McGraw Hill Publishing Company Ltd.
- Godfrey Boyle, "Renewable Energy, Power for a sustainable future", 2004, Oxford University Press, in association with The Open University.
- Dr. P Jayakumar, Solar Energy: Resource Assessment Handbook, 2009.
- J.Balfour, M.Shaw and S. Jarosek, Photovoltaics, Lawrence J Goodrich (USA).
- http://en.wikipedia.org/wiki/Renewable_energy.

Part II Physics Syllabus : General Course

5 Syllabi for Core Courses (General)

These courses will also serve as Generic Elective (GE) courses for students who have honours in a subject other than Physics.

5.1 Semester - 1: Mechanics

Mechanics (Theory)

Paper: PHS-G-CC-1-1-TH

- 1. Mathematical Methods
 - (a) Vector Algebra: Vectors as directed line segments. Addition of vectors and multiplication by a scalar. Scalar and vector products. Basis and representation of vectors.
 - (b) Vector Analysis: Derivatives of a vector with respect to a parameter. Gradient, divergence and Curl. Vector integration, line, surface and volume integrals of vector fields. Gauss'-divergence theorem and Stoke's theorem of vectors (Statement only).
 - 2. Laws of Motion
 - (a) Laws of Motion: Frames of reference. Newton's Laws of motion. Dynamics of a system of particles. Conservation of momentum. Centre of Mass.
 - 3. Work and Energy
 - (a) Work-energy theorem. Conservative forces. Concept of Potential Energy. Conservation of energy.
 - 4. Gravitation
 - (a) Motion of a particle in a central force field. Conservation of angular momentum leading to restriction of the motion to a plane and constancy of areal velocity. Newton's Law of Gravitation. Kepler's Laws (statement only). Satellite in circular orbit and applications. Geosynchronous orbits. Basic idea of global positioning system (GPS). Weightlessness.
 - 5. Oscillations
 - (a) Simple harmonic motion. Differential equation of SHM and its solutions. Kinetic and Potential Energy, Total Energy and their time averages. Damped oscillations. Forced oscillations with harmonic forces. Compound pendulum.

- 6. Rotational Motion
 - (a) Rotation of a rigid body about a fixed axis. Angular velocity and angular momentum. Moment of Inertia. Torque. Conservation of angular momentum.
- 7. Elasticity
 - (a) Hooke's law Stress-strain diagram. Elastic moduli-relation between elastic constants - Poisson's Ratio-Expression for Poisson's ratio in terms of elastic constants.
 - (b) Twisting couple on a cylinder Determination of Rigidity modulus by static torsion. Torsional pendulum.
 - (c) Bending of beams.
 - (d) Work done in stretching and work done in twisting a wire.
- 8. Surface Tension
 - (a) Synclastic and anticlastic surface Excess of pressure Application to spherical drops and bubbles - variation of surface tension with temperature.
- 9. Viscosity
 - (a) Rate flow of liquid in a capillary tube Poiseuille's formula.

- University Physics. FW Sears, MW Zemansky and HD Young13/e, 1986. Addison- Wesley
- Mechanics Berkeley Physics course, v.1: Charles Kittel, et. Al. 2007, Tata McGraw-Hill.
- Physics Resnick, Halliday & Walker 9/e, 2010, Wiley.
- Engineering Mechanics, Basudeb Bhattacharya, 2 nd edn., 2015, Oxford University Press.
- Physics for Degree Students (For B.Sc. 1st Year); C.L. Arora & P.S. Hemme; S.Chand Publishing.
- University Physics, Ronald Lane Reese, 2003, Thomson Brooks/Cole.

Mechanics (Practical)

PHS-G-CC-1-1-P

Credits: 2

List of Practicals

- 1. Determination of Moment of inertia of cylinder/bar about axis by measuring the time period, of the cradle and with body of known moment of Inertia.
- 2. Determination of Y modulus of a metal bar of rectangular cross section by the method of flexure.
- 3. Determination of rigidity modulus of wire by measuring the time period of torsional oscillation of a metal cylinder attached to it.
- 4. Determination of Moment of Inertia of a flywheel.
- 5. Determination gravitational acceleration, g using bar pendulum.
- 6. To determine the height of a building using sextant.

General Topic

- 1. Measurements of length (or diameter) using vernier caliper, screw gauge and travelling microscope.
- 2. To study the random error in observations.

- Advanced Practical Physics for students, B. L. Flint and H.T. Worsnop, 1971, Asia Publishing House
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Edn, 2011, Kitab Mahal
- Engineering Practical Physics, S.Panigrahi & B.Mallick, 2015, Cengage Learning India Pvt. Ltd.
- Practical Physics, G.L. Squires, 2015, 4th Edition, Cambridge University Press.

5.2 Semester - 2: Electricity and Magnetism

Electricity and Magnetism (Theory)

Paper: PHS-G-CC-2-2-TH

- 1. Electrostatics
 - (a) Coulombs law. Principle of superposition. Electrostatic Field.
 - (b) Divergence of the Electrostatic field. Flux, Gauss's theorem of electrostatics. Applications of Gauss theorem to find Electric field due to point charge, infinite line of charge, uniformly charged spherical shell and solid sphere, plane charged sheet, charged conductor.
 - (c) Curl of the Electrostatic Field. Electric potential as line integral of electric field. Potential for a uniformly charged spherical shell and solid sphere. Calculation of electric field from potential. Electric potential and field due to an electric dipole. Electric dipole moment. Force and Torque on a dipole.
 - (d) Conductors: Electric field and charge density inside and on the surface of a conductor. Force per unit area on the surface. Capacitance of a conductor. Capacitance an isolated spherical conductor. Parallel plate, spherical and cylindrical condenser. Energy per unit volume in electrostatic field.
 - (e) Electric Fields inside matter: Electric Polarisation. Bound charges. Displacement vector. Gauss's theorem in dielectrics. Linear Dielectric medium. Electric Succeptibility and Permittivity. Parallel plate capacitor completely filled with dielectric.
- 2. Magnetism
 - (a) Biot-Savart's law and the Lorentz force law. Application of Biot-Savart's law to determine the magnetic field of a straight conductor, circular coil, solenoid carrying current. Force between two straight current carrying wires.
 - (b) Divergence of the magnetic field. Magnetic vector potential.
 - (c) Curl of the magnetic field. Ampere's circuital law. Determination of the magnetic field of a straight current carrying wire. Potential and field due to a magnetic dipole. Magnetic dipole moment. Force and torque on a magnetic dipole.
 - (d) Magnetic fields inside matter: Magnetization. Bound currents. The magnetic intensity - H. Linear media. Magnetic susceptibility and Permeability. Brief introduction of dia-, para- and ferro-magnetic materials.

- 3. Electromagnetic Induction
- 4. Ohms law and definition of E.M.F. Faraday's laws of electromagnetic induction, Lenz's law, self and mutual inductance, L of single coil, M of two coils. Energy stored in magnetic field.
- 5. Linear Network
 - (a) Impedance of L, C, R and their combinations. Thevenin & Norton's Theorem. Maximum power transfer theorem and superposition theorem. Anderson's bridge.
- 6. Maxwell's Equations and Electromagnetic Wave Propagation
 - (a) Equation of continuity of current, Displacement current, Maxwell's equations, Poynting vector, energy density in electromagnetic field, electromagnetic wave propagation through vacuum and isotropic dielectric medium, transverse nature of EM waves, Polarization of E.M. waves.

- Itroduction to Electrodynamics, David J Griffiths 3rd Edn, 1998, Benjamin Cummings.
- Electricity and Magnetism, Edward M. Purcell, 1986, McGraw-Hill Education.
- Electricity and Magnetism, J.H. Fewkes & J. Yarwood. Vol. I, 1991, Oxford Univ. Press.
- Electricity and Magnetism, D C Tayal, 1988, Himalaya Publishing House.
- University Physics, Ronald Lane Reese, 2003, Thomson Brooks/Cole.
- Electricity and Magnetism; R. Murugeshan; S. Chand Publishing.

Electricity and Magnetism (Practical)

Paper: PHS-G-CC-2-2-P

Credits: 2

List of Practicals

- 1. Determination of unknown resistance by Carey Foster method.
- 2. Measurement of a current flowing through a register using potentiometer.
- 3. Determination of the horizontal components of earths magnetic field.
- 4. Conversion of an ammeter to a voltmeter.

- 5. Conversion of a voltmeter to an Ammeter.
- 6. Verification of Thevenin & Norton theorem and superposition theorem.

General topics

1. Use a Multimeter for measuring (a) Resistances, (b) AC and DC Voltages, (c) DC Current, (d) Capacitances (e) Checking electrical fuses (f) circuit continuity check and (g) moving coil galvanometer (in dead beat and ballistic mode), etc.

Reference Books

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers
- Engineering Practical Physics, S.Panigrahi and B.Mallick, 2015, Cengage Learning.
- A Laboratory Manual of Physics for undergraduate classes, D.P.Khandelwal, 1985, Vani Pub.

5.3 Semester - 3: Thermal Physics and Statistical Mechanics

Thermal Physics and Statistical Mechanics (Theory)

Paper: PHS-G-CC-3-3-TH

- 1. Laws of Thermodynamics
 - (a) Thermodynamic Description of system: Zeroth Law of thermodynamics and temperature. First law and internal energy, conversion of heat into work, Various Thermodynamical Processes, Applications of First Law: General Relation between C_P and C_v , Work Done during Isothermal and Adiabatic Processes. Compressibility and Expansion Coefficients, Reversible and irreversible processes. Second law and Entropy, Carnot's cycle & Carnot's theorem, Entropy changes in reversible & irreversible processes, Entropy-temperature diagrams, Third law of thermodynamics, unattainability of absolute zero.

- 2. Thermodynamical Potentials
 - (a) Enthalpy, Gibbs, Helmholtz and Internal Energy functions, Maxwell's relations and applications Joule-Thompson Effect, Clausius- Clapeyron Equation, Expression for $(C_P C_V)$, C_P/C_V , TdS equations.
- 3. Kinetic Theory of Gases
 - (a) Derivation of Maxwell's law of distribution of velocities and its experimental verification, Mean free path (Zeroth Order), Transport Phenomena: Viscosity, Conduction and Diffusion (for vertical case), Law of equipartition of energy (no derivation) and its applications to specific heat of gases; mono-atomic and diatomic gases.
- 4. Theory of Radiation
 - (a) Blackbody radiation, Spectral distribution, Concept of Energy Density, Derivation of Planck's law, Deduction of Wien's distribution law, Rayleigh- Jeans Law, Stefan Boltzmann Law and Wien's displacement law from Planck's law.
- 5. Statistical Mechanics
 - (a) Phase space, Macrostate and Microstate. Ensemble Ergodic hypothesis. PEAP, Entropy and Thermodynamic probability Boltzmann hypothesis. Maxwell-Boltzmann law distribution of velocity Quantum statistics (qualitative discussion only) Fermi-Dirac distribution law (statement only) electron gas as an example of Fermi gas Bose-Einstein distribution law (statement only) photon gas as an example of Bose gas- comparison of three statistics.

- Thermal Physics, S. Garg, R. Bansal and C. Ghosh, 1993, Tata McGraw-Hill.
- A Treatise on Heat, Meghnad Saha, and B.N. Srivastava, 1969, Indian Press.
- Thermodynamics, Enrico Fermi, 1956, Courier Dover Publications.
- Heat and Thermodynamics, M.W.Zemasky and R. Dittman, 1981, Mc-Graw Hill.
- Thermodynamics, Kinetic theory & Statistical thermodynamics, F.W.Sears and G.L. Salinger. 1988, Narosa.
- Heat, Thermodynamics and Statistical Physics; B. Lal, N. Subramanyam and P.S.Hemme; S.Chand Publishing.
- Thermal Physics, A. Kumar and S.P. Taneja, 2014, R. chand Publications.
- University Physics, Ronald Lane Reese, 2003, Thomson Brooks/Cole.

Thermal Physics and Statistical Mechanics (Practical)

Paper: PHS-G-CC-3-3-P

Credits: 2

List of Practicals

- 1. Determination of the coefficient of thermal expansion of a metalic rod using an optical lever.
- 2. Verification of Stefan's law of radiation by the measurement of voltage and current of a torch bulb glowing it beyond draper point.
- 3. Calibration of a thermocouple by direct measurement of the thermo emf using operational amplifier.
- 4. To determine the Coefficient of Thermal Conductivity of a bad conductor by Lee and Charlton's disc method.
- 5. To determine the Temperature Coefficient of Resistance by Platinum Resistance Thermometer (PRT) using constant current source.
- 6. Determination of the pressure coefficient of air using Jolly's apparatus.

Reference Books

- Advanced Practical Physics for students, B. L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Laboratory Manual of Physics for undergraduate classes, D. P. Khandelwal, 1985, Vani Pub.

5.4 Semester - 4: Waves and Optics

Waves and Optics (Theory)

Paper: PHS-G-CC-4-4-TH

- 1. Superposition of Two Collinear Harmonic oscillations
 - (a) Linearity & Superposition Principle. (1) Oscillations having equal frequencies and (2) Oscillations having different frequencies (Beats).
- 2. Superposition of Two Perpendicular Harmonic Oscillation
 - (a) Graphical and Analytical Methods. Lissajous Figures with equal an unequal frequency and their uses.

- 3. Wave Motion General
 - (a) Transverse waves on a string. Travelling and standing waves on a string. Normal Modes of a string. Group velocity, Phase velocity. Plane waves. Spherical waves, Wave intensity.
- 4. Sound
 - (a) Review of SHM, damped & forced vibrations resonance. Fourier's Theorem - Application to saw tooth wave and square wave. Intensity and loudness of sound - Decibels - Intensity levels. Musical notes musical scale. Acoustics of buildings: Reverberation and time of reverberation - Absorption coefficient - Sabine's formula - measurement of reverberation time - Acoustic aspects of halls and auditoria.
- 5. Wave Optics General
 - (a) Electromagnetic nature of light. Definition and Properties of wave front. Huygens Principle.
- 6. Interference
 - (a) Interference: Division of amplitude and division of wavefront. Young's Double Slit experiment. Lloyd's Mirror and Fresnel's Biprism. Phase change on reflection: Stoke's treatment. Interference in Thin Films: parallel and wedge-shaped films. Fringes of equal inclination (Haidinger Fringes); Fringes of equal thickness (Fizeau Fringes). Newton's Rings: measurement of wavelength and refractive index.
- 7. Michelson's Interferometer
 - (a) Idea of form of fringes (no theory needed), Determination of wavelength, Wavelength difference, Refractive index, and Visibility of fringes.
- 8. Diffraction
 - (a) Fraunhofer diffraction- Single slit; Double Slit. Multiple slits and Diffraction grating.
 - (b) Fresnel Diffraction: Half-period zones. Zone plate. Fresnel Diffraction pattern of a straight edge, a slit and a wire using half-period zone analysis.
- 9. Polarization
- 10. Transverse nature of light waves. Plane polarized light production and analysis. Circular and elliptical polarization. Optical activity.

- Fundamentals of Optics, F.A Jenkins and H.E White, 1976, McGraw-Hill.
- Principles of Optics, B.K. Mathur, 1995, Gopal Printing.
- University Physics. F.W. Sears, M.W. Zemansky and H.D. Young. 13/e, 1986. Addison-Wesley.
- Fundamentals of Optics, H.R. Gulati and D.R. Khanna, 1991, R. Chand Publications.
- Mechanics; D.S.Mathur and P.S.Hemme; S.Chand Publishing.

Waves and Optics (Practical)

Paper: PHS-G-CC-4-4-P

Credits: 2

List of Practicals

- 1. Determination of the refractive index of material of a lens and that of a liquid using a convex lens and a plane mirror.
- 2. Determination of the focal length of a concave lens by auxiliary lens method.
- 3. Determination of the frequency of a tuning fork with the help of sonometer using n-l curve.
- 4. Determination of radius of curvature / wavelength of a monochromatic / quasi monochromatic light using Newtons ring.
- 5. Measurement of the spacing between the adjacent slits in a grating by measuring $\sin \theta$ vs λ graph of a certain order of grating spectra.
- 6. Measurement of specific rotation of active solution (e.g., sugar solution) using polarimeter.

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House
- A Text Book of Practical Physics, I. Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers
- A Laboratory Manual of Physics for undergraduate classes, D.P.Khandelwal, 1985, Vani Pub.

6 Syllabi for Discipline Specific Elective Courses (General)

6.1 DSE-A: Electronics and Instrumentation

Electronics and Instrumentation - (Theory)

Paper: PHS-G-DSE-A-TH

- 1. Semiconductor Devices and Amplifiers
 - (a) Semiconductor Diodes: P and N type semiconductors. Barrier Formation in PN Junction Diode. Qualitative Idea of Current Flow Mechanism in Forward and Reverse Biased Diode. PN junction and its characteristics. Static and Dynamic Resistance. Principle and structure of (1) LEDs, (2) Photodiode, (3) Solar Cell.
 - (b) Bipolar Junction transistors: n-p-n and p-n-p Transistors. Characteristics of CB, CE and CC Configurations. Active, Cutoff & Saturation regions Current gains α and β. Relations between α and β. Load Line analysis of Transistors. DC Load line & Q-point. Voltage Divider Bias Circuit for CE Amplifier. H-parameter, Equivalent Circuit. Analysis of single-stage CE amplifier using hybrid Model. Input & output Impedance. Current, Voltage and Power gains. Class A, B & C Amplifiers.
- 2. Operational Amplifiers
 - (a) Characteristics of an Ideal and Practical Op-Amp (IC 741), Openloop and closed- loop Gain. CMRR, concept of Virtual ground. Applications of Op-Amps: (1) Inverting and non-inverting Amplifiers, (2) Adder, (3) Subtractor, (4) Differentiator, (5) Integrator, (6) Zero crossing detector.
 - (b) Sinusoidal Oscillators: Barkhausen's Criterion for Self-sustained Oscillations. Determination of Frequency of RC Oscillator.
- 3. Digital Circuits
 - (a) Difference between Analog and Digital Circuits.
 - (b) Binary Numbers. Decimal to Binary and Binary to Decimal Conversion.
 - (c) AND, OR and NOT Gates (Realization using Diodes and Transistor). NAND and NOR Gates as Universal Gates. XOR and XNOR Gates. De Morgan's Theorems. Boolean Laws. Simplification of Logic Circuit using Boolean Algebra.
 - (d) Fundamental Products. Minterms and Maxterms. Conversion of a Truth Table into an Equivalent Logic Circuit by (1) Sum of Products Method and (2) Karnaugh Map.

- (e) Binary Addition. Binary Subtraction (using 2's Complement Method).
- (f) Half Adders and Full Adders and Subtractors, 4-bit binary Adder-Subtractor.

4. Instrumentations

- (a) Introduction to CRO: Block Diagram of CRO. Applications of CRO: (1) Study of Waveform, (2) Measurement of Voltage, Current, Frequency, and Phase Difference. Power Supply: Half-wave Rectifiers. Centre-tapped and Bridge. Full-wave Rectifiers Calculation of Ripple Factor and Rectification Efficiency. Basic idea about capacitor filter.
- (b) Zener Diode and Voltage Regulation.
- (c) Timer IC: IC 555 Pin diagram and its application as Astable and Monostable Multivibrator.

- Integrated Electronics, J. Millman and C.C. Halkias, 1991, Tata Mc-Graw Hill.
- Electronic devices & circuits, S. Salivahanan & N.S. Kumar, 2012, Tata Mc-Graw Hill.
- Microelectronic Circuits, M.H. Rashid, 2nd Edn., 2011, Cengage Learning.
- Modern Electronic Instrumentation and Measurement Tech., Helfrick and Cooper, 1990, PHI Learning
- Digital Principles and Applications, A.P. Malvino, D.P. Leach and Saha, 7th Ed., 2011, Tata McGraw Hill.
- Microelectronic circuits, A.S. Sedra, K.C. Smith, A.N. Chandorkar, 2014, 6th Edn., Oxford University Press.
- Fundamentals of Digital Circuits, A. Anand Kumar, 2nd Edition, 2009, PHI Learning Pvt. Ltd.
- OP-AMP & Linear Digital Circuits, R.A. Gayakwad, 2000, PHI Learning Pvt. Ltd.

Electronics and Instrumentation - (Practical)

Paper: PHS-G-DSE-A-P

Credits: 2

List of Practicals

- 1. To measure (a) Voltage, and (b) Frequency of a periodic waveform using CRO
- 2. To verify and design AND, OR, NOT and XOR gates using NAND gates.
- 3. Half adder, Full adder and 4-bit Binary Adder.
- 4. To design an astable multivibrator of given specifications using 555 Timer.
- 5. To study the characteristics of a Transistor in CE configuration.
- 6. To design a CE amplifier of given gain (mid-gain) using voltage divider bias.
- 7. To design an inverting and a non-inverting amplifier of given gain using Op-amp 741 and to study their frequency response.

Reference Books

- Basic Electronics: A text lab manual, P.B. Zbar, A.P. Malvino, M.A. Miller, 1994, Mc-Graw Hill.
- Electronics: Fundamentals and Applications, J.D. Ryder, 2004, Prentice Hall.
- OP-Amps & Linear Integrated Circuit, R.A. Gayakwad, 4th Edn, 2000, Prentice Hall.
- Electronic Principle, Albert Malvino, 2008, Tata Mc-Graw Hill.

6.2 DSE-A: Modern Physics

Modern Physics - (Theory)

PHS-G-DSE-A-TH

Credits: 5 (+1 for Tutorial)

- 1. Special Theory of Relativity
 - (a) Michelson-Morley experiment. Lorentz transformation. Time dilation and length contraction. Velocity addition rule.
 - (b) Relativistic dynamics. Elastic collision between two particles. Idea of relativistic momentum and relativistic mass. Mass-energy equivalence.

- 2. Elements of Quantum Mechanics
 - (a) Blackbody Radiation, Planck's quantum, Planck's constant. Photoelectric effect and Compton scattering - light as a collection of photons. Davisson-Germer experiment. De Broglie wavelength and matter waves. Wave-particle duality. Wave description of particles by wave packets. Group and Phase velocities and relation between them. Probability interpretation: Normalized wave functions as probability amplitudes. Heisenberg uncertainty principle (Statement with illustrations). Impossibility of a particle following a trajectory.
 - (b) Limitations of Ruherford's model of atomic structure. Bohr's model, its successes and limitations.
 - (c) Quantum states as normalized functions and observables as linear hermitian operators. Significance of the eigenvalue equations. Application to a particle in one dimension: Position, Momentum and Energy operators.
 - (d) Time evolution of the quantum state: Schrodinger's equation. Stationary states. Properties of wave function. Probability and probability current densities in one dimension.
 - (e) Bound states: Particle in a one dimensional rigid box. Energy eigenvalues and eigenvectors.
 - (f) Scatterring: Scatterring by a step potential and rectangular barrier. Tunnelling.
- 3. Atomic Physics
 - (a) Quantum theory of hydrogen-like atoms
 - i. Schrodinger equation in spherical polar coordinates. Separation of variables. Angular equation and orbital angular momentum. (Solution to the differential equations should be assumed). Radial equation for attractive coulomb interaction Hydrogen atom. Solution for the radial wavefunctions (Solution to the differential equation should be assumed). Shapes of the probability densities for ground & first excited states. Orbital angular momentum quantum numbers l and m; s, p, d, shells.
 - (b) Generalized Angular Momenta and Spin.
 - i. Generalized angular momentum. Electron's magnetic moment and Spin Angular Momentum. Gyromagnetic Ratio and Bohr Magneton and the g - factor. Energy associated with a magnetic dipole placed in magnetic field. Stern-Gerlach Experiment.
 - ii. Addition of angular momenta statement only. Restriction of eigenvalues from $|j_1 j_2|$ to $|j_1 + j_2|$.
 - iii. Zeeman effect.

- (c) Many electron atoms
 - i. Identical particles. Symmetric & Antisymmetric Wave Functions. Pauli's Exclusion Principle. Hund's Rule. Periodic table.

- Introduction to Special Relativity, R. Resnick, 2005, John Wiley and Sons.
- Special Relativity (MIT Introductory Physics). A.P. French, 2018, CRC Press.
- Concepts of Modern Physics, Arthur Beiser, 2002, McGraw-Hill.
- Introduction to Modern Physics, Rich Meyer, Kennard, Cooper, 2002, Tata McGraw Hill.
- Introduction to Quantum Mechanics, David J. Griffith, 2005, Pearson Education.
- Physics for scientists and Engineers with Modern Physics, Jewett and Serway, 2010, Cengage Learning.
- Modern Physics, G.Kaur and G.R. Pickrell, 2014, McGraw Hill.
- Quantum Mechanics: Theory & Applications, A.K.Ghatak & S.Lokanathan, 2004, Macmillan Additional Books for Reference Modern Physics, J.R. Taylor, C.D. Zafiratos, M.A. Dubson, 2004, PHI Learning.
- Theory and Problems of Modern Physics, Schaum's outline, R. Gautreau and W. Savin, 2nd Edn, Tata McGraw-Hill Publishing Co. Ltd.
- Quantum Physics, Berkeley Physics, Vol.4. E.H.Wichman, 1971, Tata McGraw-Hill Co.
- Basic ideas and concepts in Nuclear Physics, K.Heyde, 3rd Edn., Institute of Physics Pub.
- Modern Physics; R.Murugeshan & K.Sivaprasath; S. Chand Publishing.
- Six Ideas that Shaped Physics: Particle Behave like Waves, T.A.Moore, 2003, McGraw Hill..

6.3 DSE-B: Solid State Physics

Solid State Physics - (Theory)

Paper: PHS-G-DSE-B-TH

- 1. Preliminary Topics
 - (a) Review of Schrodinger equation in one dimension, stationary states. Maxwell-Boltzman distribution law.

- 2. Crystal Structure
 - (a) Solids: Amorphous and Crystalline Materials. Lattice Translation Vectors. Lattice with a Basis. Unit Cell. Miller Indices. Reciprocal Lattice. Types of Lattices. Brillouin Zones. Diffraction of X-rays by Crystals. Bragg's Law. Atomic and Geometrical Factor.
- 3. Elementary Lattice Dynamics
 - (a) Lattice Vibrations and Phonons: Linear Monoatomic and Diatomic Chains. Acoustical and Optical Phonons. Qualitative Description of the Phonon Spectrum in Solids. Dulong and Petit's Law, Einstein and Debye theories of specific heat of solids T^3 law (qualitative discussions only).
- 4. Magnetic Properties of Matter (qualitative discussions only)
 - (a) Dia-, Para-, Ferri- and Ferromagnetic Materials. Classical Langevin Theory of Dia- and Paramagnetic Domains. Quantum Mechanical Treatment of Paramagnetism. Curie's law, Weiss's Theory of Ferromagnetism and Ferromagnetic Domains. Discussion of B-H Curve. Hysteresis and Energy Loss.
- 5. Dielectric Properties of Materials (qualitative discussions only)
 - (a) Polarization. Local Electric Field at an Atom. Depolarization Field. Electric Susceptibility. Polarizability. Clausius Mosotti Equation. Classical Theory of Electric Polarizability. Normal and Anomalous Dispersion. Cauchy and Sellmeir relations.
- 6. Elementary band theory (qualitative discussions only)
 - (a) Kronig Penny model (results should be assumed no analysis required). Band Gap. Conductor, Semiconductor (P and N type) and insulator. Conductivity of Semiconductor, mobility.

- The Oxford Solid State Basics. S. H. Simon, 2013, Oxford.
- Elementary Solid State Physics, 1/e M. Ali Omar, 1999, Pearson India.
- Introduction to Solid State Physics, Charles Kittel, 8th Ed., 2004, Wiley India Pvt. Ltd.
- Elements of Solid State Physics, J.P. Srivastava, 2nd Ed., 2006, Prentice-Hall of India ► Introduction to Solids, Leonid V. Azaroff, 2004, Tata Mc-Graw Hill.
- Solid State Physics, N.W. Ashcroft and N.D. Mermin, 1976, Cengage Learning.
- Solid State Physics, Rita John, 2014, McGraw Hill.
- Solid-state Physics, H. Ibach and H. Luth, 2009, Springer.
- Solid State Physics; R.K.Puri and V.K.Babbar; S. Chand Publishing.
- Solid State Physics, M.A. Wahab, 2011, Narosa Publications.

Solid State Physics - (Practical)

Paper: PHS-G-DSE-B-P

Credits: 2

List of Practicals

- 1. To study PE hysteresis of ferroelectric crystal.
- 2. To study BH hysteresis of ferromagnetic material.
- 3. Measurement of susceptibility of paramagnetic solution by Quink"s tube method.
- 4. Measurement of magnetic susceptibility of solids.
- 5. Determination of variation of dielectric constant with frequency.
- 6. Measurement of hall voltage by four probe method.

Reference Books

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Edn., 2011, Kitab Mahal.
- Elements of Solid State Physics, J.P. Srivastava, 2nd Ed., 2006, Prentice-Hall of India

6.4 DSE-B: Nuclear & Particle Physics

Nuclear & Particle Physics - (Theory)

Paper: PHS-G-DSE-B-TH

Credits: 5 (+1 for Tutorial)

- 1. General Properties of Nuclei
 - (a) Constituents of nucleus and their Intrinsic properties, quantitative facts about mass, radii, charge density (matter density), binding energy, average binding energy and its variation with mass number, main features of binding energy versus mass number curve, N/A plot, angular momentum, parity, magnetic moment, electric moments, nuclear excites states.
- 2. Nuclear Models
 - (a) Liquid drop model approach, semi empirical mass formula and significance of its various terms, condition of nuclear stability, two nucleon separation energies.
 - (b) Evidence for nuclear shell structure nuclear magic numbers. Basic assumptions of shell model, concept of mean field, residual interaction, concept of nuclear force.
- 3. Radioactivity
 - (a) α decay: basics of α decay processes. Theory of α emission, Gamow factor, Geiger Nuttall law, α decay spectroscopy.
 - (b) β decay: energy and kinematics of β decay, positron emission, electron capture, neutrino hypothesis.
 - (c) γ decay: Gamma ray emission & kinematics, internal conversion.
- 4. Nuclear Reactions
 - (a) Types of Reactions, Conservation Laws, kinematics of reactions, Qvalue, reaction rate, reaction cross section, Concept of compound and direct Reaction, resonance reaction, Coulomb scattering (Rutherford scattering).
- 5. Interaction of Nuclear Radiation with matter
 - (a) Energy loss due to ionization (Bethe- Block formula), energy loss of electrons, Cerenkov radiation. Gamma ray interaction through matter, photoelectric effect, Compton scattering, pair production, neutron's interaction with matter.

- 6. Detector for Nuclear Radiations
 - (a) Gas detectors: estimation of electric field, mobility of particle, for ionization chamber and GM Counter. Basic principle of Scintillation Detectors and construction of photo-multiplier tube (PMT). Semiconductor Detectors (Si and Ge) for charge particle and photon detection (concept of charge carrier and mobility), neutron detector.
- 7. Particle Accelerators
 - (a) Accelerator facility available in India: Van-de Graaff generator (Tandem accelerator), Linear accelerator, Cyclotron, Synchrotrons.
- 8. Particle Physics
 - (a) Fundamental particles and their families. Fundamental particle-interactions and their basic features. Symmetries and Conservation Laws: energy and momentum, angular momentum, parity, baryon number, Lepton number, Isospin, Strangeness and charm. Quark model, color quantum number and gluons. Quark structure of hadrons.

Reference Books

- Introductory nuclear Physics by Kenneth S. Krane (Wiley India Pvt. Ltd., 2008).
- Concepts of nuclear physics by Bernard L. Cohen. (Tata Mcgraw Hill, 1998).
- Introduction to the physics of nuclei & particles, R.A. Dunlap. (Thomson Asia, 2004).
- Introduction to High Energy Physics, D.H. Perkins, Cambridge Univ. Press.
- Introduction to Elementary Particles, D. Griffith, John Wiley & Sons.
- Quarks and Leptons, F. Halzen and A.D. Martin, Wiley India, New Delhi.
- Basic ideas and concepts in Nuclear Physics An Introductory Approach by K. Heyde (IOP- Institute of Physics Publishing, 2004).
- Radiation detection and measurement, G.F. Knoll (John Wiley & Sons, 2000).
- Physics and Engineering of Radiation Detection, Syed Naeem Ahmed (Academic Press, Elsevier, 2007).
- Theoretical Nuclear Physics, J.M. Blatt & V.F. Weisskopf (Dover Pub.Inc., 1991)

- 7 Syllabi for Skill Enhancement Courses (General)
- 7.1 SEC-A: Basics of Programming and Scientific Word Processing

Basics of Programming and Scientific Word Processing - (Theory)

Paper: PHS-G-SEC-A-TH

Credits: 2

- 1. Elements of Programming
 - (a) An overview computers: History of computers, overview of architecture of computer, compiler, assembler, machine language, high level language, object oriented language, programming language.
 - (b) Algorithms and Flowcharts:
 - i. Algorithm definition, properties and development.
 - ii. Flowchart Concept of flowchart, symbols, guidelines, types.
- 2. Basic programming in C/FORTRAN
 - (a) Constants, Variables and Data types.
 - (b) Operation and Expressions Arithmetic operators, relational operators, logical operators.
 - (c) Managing input/output.
 - (d) Decision Making and Branching.
 - (e) Decision making and Looping.
 - (f) Arrays : One-dimension, two-dimension and multidimensional arrays, declaration of arrays, initialization of one and multi-dimensional arrays.
 - (g) User-defined Functions.
- 3. Visualization
 - (a) Introduction to graphical analysis and its limitations. Introduction to Gnuplot. importance of visualization of computational and computational data, basic Gnuplot commands: simple plots, plotting data from a file, saving and exporting, multiple data sets per file, physics with Gnuplot (equations, building functions, user defined variables and functions), Understanding data with Gnuplot.
- 4. Scientific word processing:
 - (a) Introduction to LaTeX TeX/LaTeX word processor, preparing a basic LaTeX file, Document classes, Preparing an input file for LaTeX, Compiling LaTeX File, LaTeX tags for creating different environments, Defining LaTeX commands and environments, Changing the type style, Symbols from other languages.

- (b) Equation representation: Formulae and equations, Figures and other floating bodies, Lining in columns- Tabbing and tabular environment, Generating table of contents Bibliography and citation, Making an index and glossary, List making environments,
- (c) Fonts, Picture environment and colors, errors.

Reference Books

- Introduction to Numerical Analysis, S.S. Sastry, 5th Edn., 2012, PHI Learning Pvt. Ltd.
- Computer Programming in Fortran 77". V. Rajaraman (Publisher: PHI).
- Schaum's Outline of Theory and Problems of Programming with Fortran, S Lipsdutz and A Poe, 1986Mc-Graw Hill Book Co.
- Computational Physics: An Introduction, R.C. Verma, et al. New Age International Publishers, New Delhi(1999)
- E. Balagurnsamy, Programming in ANSI C, Tata McGraw Hill, 2004.
- C. Xavier, C-Language and Numerical Methods, New Age International.
- V. Rajaraman, Computer Oriented Numerical Methods, Prentice Hall of India, 1980.
- Gnuplot in action: understanding data with graphs, Philip K Janert, (Manning 2010).
- LaTeX-A Document Preparation System", Leslie Lamport (Second Edition, Addison- Wesley, 1994).

7.2 SEC-A: Electrical Circuits and Network Skills

Electrical Circuits and Network Skills - (Theory)

Paper: PHS-G-SEC-A-TH

Credits: 2

- 1. Basic Electricity Principles
 - (a) Voltage, Current, Resistance, and Power. Ohm's law. Series, parallel, and series-parallel combinations. AC Electricity and DC Electricity. Familiarization with multimeter, voltmeter and ammeter.
- 2. Understanding Electrical Circuits
 - (a) Main electric circuit elements and their combination. Rules to analyze DC sourced electrical circuits. Current and voltage drop across the DC circuit elements. Single-phase and three-phase alternating current sources. Rules to analyze AC sourced electrical circuits. Real, imaginary and complex power components of AC source. Power factor. Saving energy and money.

- 3. Electrical Drawing and Symbols
 - (a) Drawing symbols. Blueprints. Reading Schematics. Ladder diagrams. Electrical Schematics. Power circuits. Control circuits. Reading of circuit schematics. Tracking the connections of elements and identify current flow and voltage drop.
- 4. Generators and Transformers
 - (a) DC Power sources. AC/DC generators. Inductance, capacitance, and impedance. Operation of transformers.
- 5. Electric Motors
 - (a) Single-phase, three-phase & DC motors. Basic design. Interfacing DC or AC sources to control heaters & motors. Speed & power of ac motor.
- 6. Solid-State Devices
 - (a) Resistors, inductors and capacitors. Diode and rectifiers. Components in Series or in shunt. Response of inductors and capacitors with DC or AC sources.
- 7. Electrical Protection
 - (a) Relays. Fuses and disconnect switches. Circuit breakers. Overload devices. Ground-fault protection.Page 97 Grounding and isolating. Phase reversal. Surge protection. Interfacing DC or AC sources to control elements (relay protection device)
- 8. Electrical Wiring
 - (a) Different types of conductors and cables. Basics of wiring Star and delta connection. Voltage drop and losses across cables and conductors. Instruments to measure current, voltage, power in DC and AC circuits. Insulation. Solid and stranded cable. Conduit. Cable trays. Splices: wirenuts, crimps, terminal blocks, split bolts, and solder. Preparation of extension board.

Reference Books

- A text book in Electrical Technology B L Theraja S Chand & Co.
- A text book of Electrical Technology A K Theraja.
- Performance and design of AC machines M G Say ELBS Edn.

7.3 SEC-B: Computer Algebra System & Figure Drawing Skill

Computer Algebra System & Figure Drawing Skill - (Theory)

Paper: PHS-G-SEC-B-TH

Credits: 2

- 1. Elementary symbolic computation using some computer algebra system (CAS) like Yacas or Maxima.
 - (a) Arithmetic and other operations on numbers.
 - (b) Calculus and elementary functions, Simplification of expressions, Solvers, Differential Equations.
 - (c) Linear Algebra
 - (d) Operations on polynomials
 - (e) List operations
 - (f) Predicates
 - (g) Input/output and plotting
 - (h) Probability and Statistics
 - (i) Numerical methods using CAS
 - (j) Physics specific applications
- 2. Figure generation using drawing tools like xfig/ latexdraw/ inkscape etc.
 - (a) Drawing lines with/without arrows with different line styles.
 - (b) Drawing curves with different line styles including brazier curves.
 - (c) Drawing different types of shapes including circle, ellipse, polygons etc.
 - (d) Changing figure properties like position, colour, orientation, size, shape, line properties, filling properties etc.
 - (e) Grouping and ungrouping of figures.
 - (f) Exporting the figure into different file formats.

Reference

- https://yacas.readthedocs.io/en/latest/reference manual/
- The Maxima Book; Paulo Ney de Souza Richard J. Fateman Joel Moses Cliff Yapp; http://maxima.sourceforge.net/docs/maximabook/maximabook-19-Sept-2004.pdf.
- Get Started With Maxima: https://www.whoishostingthis.com/resources/maxima/
- Xfig user manual: http://mcj.sourceforge.net/

- LaTeXDraw Manual: https://github.com/arnobl/latexdraw/wiki/Manual
- The Book of Inkscape: The Definitive Guide to the Free Graphics Editor (1st ed.), No Starch Press, p. 476, ISBN 1-59327-181-6
- https://www.youtube.com/watch?v=zUIOEXssTSE

7.4 SEC-B: Renewable Energy and Energy Harvesting

Renewable Energy and Energy Harvesting - (Theory)

Paper: PHS-G-SEC-B-TH

Credits: 2

- 1. Fossil fuels and Alternate Sources of energy
 - (a) Fossil fuels and nuclear energy, their limitation, need of renewable energy, non-conventional energy sources. An overview of developments in Offshore Wind Energy, Tidal Energy, Wave energy systems, Ocean Thermal Energy Conversion, solar energy, biomass, biochemical conversion, biogas generation, geothermal energy tidal energy, Hydroelectricity.
- 2. Solar energy
 - (a) Solar energy, its importance, storage of solar energy, solar pond, nonconvective solar pond, applications of solar pond and solar energy, solar water heater, flat plate collector, solar distillation, solar cooker, solar green houses, solar cell, absorption air conditioning. Need and characteristics of photovoltaic (PV) systems, PV models and equivalent circuits, and sun tracking systems.
- 3. Wind Energy harvesting
 - (a) Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines, Power electronic interfaces, and grid interconnection topologies.
- 4. Ocean Energy
 - (a) Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices. Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy, Osmotic Power, Ocean Bio-mass.
- 5. Geothermal Energy
 - (a) Geothermal Resources, Geothermal Technologies.
- 6. Hydro Energy
 - (a) Hydropower resources, hydropower technologies, environmental impact of hydro power sources.

- 7. Piezoelectric Energy harvesting
 - (a) Introduction, Physics and characteristics of piezoelectric effect, materials and mathematical description of piezoelectricity, Piezoelectric parameters and modeling piezoelectric generators, Piezoelectric energy harvesting applications, Human power
- 8. Electromagnetic Energy Harvesting
 - (a) Linear generators, physics mathematical models, recent applications
 - (b) Carbon captured technologies, cell, batteries, power consumption.
 - (c) Environmental issues and Renewable sources of energy, sustainability.

Reference Books

- Non-conventional energy sources G.D Rai Khanna Publishers, New Delhi.Solar energy M P Agarwal S Chand and Co. Ltd.
- Solar energy Suhas P Sukhative Tata McGraw Hill Publishing Company Ltd.
- Godfrey Boyle, "Renewable Energy, Power for a sustainable future", 2004, Oxford University Press, in association with The Open University.
- Dr. P Jayakumar, Solar Energy: Resource Assessment Handbook, 2009.
- J.Balfour, M.Shaw and S. Jarosek, Photovoltaics, Lawrence J Goodrich (USA).
- http://en.wikipedia.org/wiki/Renewable_energy.

8 Note on Syllabi for Generic Elective Courses

The Core Courses (CC) for the B.Sc. General Curriculum with Physics, provided in section 5 above, are to be treated as Generic Elective Course for students studying an honours course in a subject other than Physics.



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12/18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

<u>SI.</u>	Subject	<u></u>	Subject
<u>No.</u>		No.	ж. А.
1	Anthropotogy (Honours / General)	29	Mathematics (Honours / General)
2	Arabic (Honours / General)	30	Microbiology (Honours / General)
3	Persian (Honours / General)	31	Mol. Biology (General)
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)
5	Bio-Chemistry (Honours / General)	33	Physical Education (General)
6	Botany (Honours / General)	34	Physics (Honours / General)
7	Chemistry (Honours / General)	35	Physiology (Honours / General)
8	Computer Science (Honours / General)	36	Political Science (Honours / General)
9	Defence Studies (General)	37	Psychology (Honours / General)
- 10	Economics (Honours / General)	38	Sanskrit (Honours / General)
11	Education (Honours / General)	39	Social Science (General)
12	Electronics (Honours / General)	40	Sociology (Honours / General)
13	English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)
15	Environmental Studies (AECC2)	43	Women Studies (General)
16	Film Studies (General)	44	Zoology (Honours / General)
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries - IFFV (Major)
18	French (General)	46	Sericulture - SRTV (Major)
19	Geography (Honours / General)	47	Computer Applications - CMAV (Major)
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)
21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales Management – ASPV (Major)
22	History (Honours / General)	- 50	Communicative English -CMEV (Major)
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Dietetics CNDV (Major)
24	Home Science Extension Education	52	Bachelor of Business Administration (BBA)
	(General)		(Honours)
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design –
			(B.F.A.D.) (Honours)
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)
27	Human Rights (General)	55	B. Music (Honours / General) and Music
			(General)
28	Journalism and Mass Communication (Honours / General)		•

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar

University of Calcutta

Final Draft BA (Honours)-CBCS Syllabus in Political Science, 2018 (Section I)

Core Courses

[Fourteen courses; Each course: 6 credits (5 theoretical segment+ 1 for tutorial-related segment). Total: 84 credits (1400 marks).

- Each course carries 80 marks^ ^^ (plus 10 marks each for Attendance and Internal Assessment).
- <u>Minimum</u> 30 classes for Theory and 15 contact hours for Tutorial <u>per module</u>.

^End Semester Assessment for each course--- 65 marks for theoretical segment: 50 marks for subjective/descriptive questions + 15 marks for category of 1 mark-questions. <u>Question Pattern</u> for subjective/descriptive segment of 50 marks: 2 questions (within 100 words; one from each module) out of 4 (10 x2 = 20) + 2 questions (within 500 words; one from each module) out of 4 (15 x 2 = 30).

^^15 marks for tutorial-related segments as suggested below (any one item from each mode):

i) <u>Written mode</u>: upto 1000 words for one Term Paper/upto 500 words for each of the two Term Papers/ equivalent Book Review/equivalent Comprehension/equivalent Quotation or Excerpt Elaboration.

ii) <u>Presentation Mode</u>: Report Presentation/Poster Presentation/Field work--- based on syllabus-related and/or current topics (May be done in groups)[The modes and themes and/or topics are be decided by the concerned faculty members of respective colleges.]

Core courses: First 2 each in Semesters 1 and 2;Next 3 each in Semesters 3 and 4; 2 each in Semesters 5 and 6. [Sequentially arranged]

IMPORTANT NOTES:

 The Readings provided below include many of those of the UGC Model CBCS Syllabus in Political Science. For further details of Course Objectives and additional references it is advised that the UGC model CBCS syllabus* concerning relevant courses and topics be provided due importance and primarily consulted.

*Website: BA Political Science (Honours): https://www.ugc.ac.in/pdfnews/2085906_B.A-Hons.-Pol-Science.pdf

- Cited advanced texts in Bengali are not necessarily substitutes, but supplementary to the English books.
- Paper Code Format: Subject-Course-Semester-Paper Number-Paper Component.
- The format isstrictly subject to the parameters of the common structural CBCS format of the University.

List of Core Courses

- 1 Understanding Political Theory: Concepts
- 2 Understanding Political Theory: Approaches and Debates
- 3 Constitutional Government in India
- 4 Politics in India: Structures and Processes
- 5 Indian Political Thought I
- **6** Comparative Government and Politics
- 7 Perspectives on International Relations
- 8 Indian Political Thought II
- 9 Global Politics since 1945
- 10 Western Political Thought & Theory I
- 11 Western Political Thought & Theory II
- 12 Political Sociology
- 13 Public Administration: Concepts and Perspectives
- 14 Administration and Public Policy in India

[Semester-level break-up provided below]

Semester I

Understanding Political Theory: ConceptsCode: PLS-A-CC-1-1-TH+TU

Module I:

1. Conceptualising politics: meaning of *political*.

2.Key concepts I: State; Nation; Sovereignty (evolution); Power and Authority--- types and linkages; 3.Key concepts II: Law. Liberty, Equality--- interrelationships.

Module II:

4. Key concepts III: Rights; Justice (with special reference to Rawls); Freedom.

5. Key concepts IV: Democracy (with special reference to David Held); Authoritarianism.

6. Key concepts V: Citizenship.

Readings:

Bhargava, R. (2008) 'What is Political Theory' in Bhargava, R and Acharya, A. (eds.) PoliticalTheory: An Introduction.pp. 2-16.

Bellamy, R. (1993) 'Introduction: The Demise and Rise of Political Theory', in Bellamy, R. (ed.) Theories and Concepts of Politics. New York: Manchester University Press, pp. 1-14.

Glaser, D. (1995) 'Normative Theory', in Marsh, D. and Stoker, G. (eds.) Theory and Methodsin Political Science. London: Macmillan, pp. 21-40.

D. Held: Political Theory Today.

D. Held: Models of Democracy.

N. Daniels: Reading Rawls.

Andrew Heywood: The Basic Political Concepts.

S. Ramaswamy: Political Theory--- Ideas and Concepts.

S.P. Verma: Modern Political Theory.

T. Ball and R. Bellamy: Twentieth Century Political Thought.

R. Bellamy: Theories and Concepts in Politics: An Introduction.

C. McKinnan: Issues in Political Theory.

Menon, Krishna. (2008) 'Justice', in Bhargava, Rajeev and Acharya, Ashok. (eds.) PoliticalTheory: An Introduction, pp. 74-86.

Understanding Political Theory: Approachesand DebatesCode: PLS-A-CC-1-2-TH+TU

Module I:

1. Approaches I: Normative; Legal-Institutional; Empirical-Behavioual---Systems Analysis; Structural Functionalism.

2. Approaches II: Liberalism; Social Welfarism; Neo-Liberalism.

3. Approaches III: Postcolonial; Feminist.

Module II:

4. Marxian approach--- Dialectical Materialism and Historical Materialism.

5. Key ideas: State (focus on Relative Autonomy); Class and Class Struggle; Surplus Value; Alienation.

6. Party--- Democratic Centralism; Lenin-Rosa Luxemburg debate; Revolution--- Lenin and Mao. Hegemony and Civil Society: Gramsci.

Readings:

K. Marx and F. Engels: The Communist Manifesto. V. I. Lenin: The State. John Gray: Liberalism. David McLellan: The Thought of Karl Marx. David McLellan: Marxism after Marx. Tom Bottomore ed.: A Dictionary of Marxist Thought. D. Riaznov ed.: The Communist Manifesto of Marx and Engels. M Cornforth: Dialectical Materialism. R. Miliband: Marxism and Politics. Laszek Kolakowski: Main Currents of Marxism (3 volumes). Ravi Kumar: Contemporary Readings in Marxism. Kymlicka: Multiculturalism. Marxist Internet Archive: www.marxist.org Gurpreet Mahajan: The Multicultural Path. R. Young: Postcolonialism: A Very Short Introduction. Richard Bellamy: Citizenship: A Very Short Introduction. Margaret Walters: Feminism: A Very Short Introduction. Arpita Mukhopadhyay: Feminisms.

For Courses I and II: কার্ল মার্ক্স ও ফ্রিডরিশ এঙ্গেলস রচনা সংকলন লেনিন নির্বাচিত রচনাবলী (বড়ো থণ্ড) টম বটমোরঃ মার্ক্সীয় সমাজতত্ব (অনুবাদ: হিমাংশু ঘোষ) দীপক কুমার দাস (সম্পাদিত): রাজনীতির ভত্বকথা (২ থণ্ড) শোভনলাল দত্তগুপ্ত : মার্কসীয় রাষ্ট্রচিন্তা (২০০৬ সং) ভোলানাথ বন্দ্যোপাধ্যায় : মরিস কর্নফোর্থ:দ্বন্দ্বমূলক বশত্তবাদ (অনুবাদ) ডৈতালি বসু: রাজনীতিশাস্ত্র ও অভিজ্ঞতাবাদী রাষ্ট্রতন্ত্র রাজশ্রী বসু ও বাসবী চক্রবর্তী (সম্পা): প্রসঙ্গ মানবীবিদ্যা অশোক সরকার: রাষ্ট্রবিজ্ঞান অভিধান শোভনলাল দত্তগুপ্ত র পারমিতা ব্যানার্জি: শিতৃতন্ত্র কাহাকে বলে (কমলা ভাসিনের What is Patriarchy-র অনুবাদ)

Semester II

Constitutional Government in India

Code: PLS-A-CC-2-3-TH+TU

Module I:

1. Evolution of the Indian Constitution. Role of the Constituent Assembly--- debates (overview). The Preamble. 2. Citizenship. Fundamental Rights and Duties. Directive Principles.

3.Nature of Indian Federalism: Union-State Relations.

4.Union Executive: President, Vice-President: election, position, functions (focus on Emergency Powers), Prime Minister, Council of Ministers, relationship of Prime Minister and President.

Module II:

5. Union Legislature: Rajya Sabha, Lok Sabha: Organisation, Functions – Lawmaking procedure, Parliamentary procedure, Privileges, Committee system. Speaker.

6.Government in states: Governor, Chief Minister and Council of Ministers: position and functions – State Legislature: composition and functions.

7.Judiciary: Supreme Court and the High Courts: composition and functions – Judicial activism.

8.Constitutional amendment. Major recommendations of National Commission to Review the Working of the Constitution.

Readings:

Constitution of India: Government of India.

- G. Austin: The Indian Constitution.
- G. Austin: Working a Democratic Constitution

S.K. Chaube: The Constituent Assembly--- Springboard of a Revolution (latest edition).

M.V. Pylee: India's Constitution.

S.L. Sikri: Indian Government and Politics.

S.C. Kashyap ed.: Perspectives on the Constitution.

A.G. Noorani: Constitutional Question in India.

G. Austin, (2010) 'The Constituent Assembly: Microcosm in Action', in The IndianConstitution: Cornerstone of a Nation, New Delhi: Oxford University Press, 15th print, pp.1-25.

R. Bhargava, (2008) 'Introduction: Outline of a Political Theory of the Indian Constitution', in R. Bhargava (ed.) Politics and Ethics of the Indian Constitution, New Delhi: Oxford University Press, pp. 1-40.

D. Basu, (2012) Introduction to the Constitution of India, New Delhi: Lexis Nexis.

S. K. Chaube, (2009) The Making and Working of the Indian Constitution, Delhi: National Book Trust.

G. Austin, (2000) 'The Social Revolution and the First Amendment', in Working a DemocraticConstitution, New Delhi: Oxford University Press, pp. 69-98.

B. Shankar and V. Rodrigues, (2011) 'The Changing Conception of Representation: Issues, Concerns and Institutions', in The Indian Parliament: A Democracy at Work, New Delhi: Oxford University Press, pp. 105-173.

V. Hewitt and S. Rai, (2010) 'Parliament', in P. Mehta and N. Jayal (eds.) The OxfordCompanion to Politics in India, New Delhi: Oxford University Press, pp. 28-42.

J. Manor, (2005) 'The Presidency', in D. Kapur and P. Mehta P. (eds.) Public Institutions inIndia, New Delhi: Oxford University Press, pp.105-127.

J. Manor, (1994) 'The Prime Minister and the President', in B. Dua and J. Manor (eds.) Nehruto the Nineties: The

Changing Office of the Prime Minister in India, Vancouver: University of British Columbia Press, pp. 20-47.

H. Khare, (2003) 'Prime Minister and the Parliament: Redefining Accountability in the Age of Coalition Government', in A. Mehra and G. Kueck (eds.) The Indian Parliament: AComparative Perspective, New Delhi: Konark, pp. 350-368.

U. Baxi, (2010) 'The Judiciary as a Resource for Indian Democracy', Seminar, Issue 615, pp. 61-67.

R. Ramachandran, (2006) 'The Supreme Court and the Basic Structure Doctrine' in B. Kirpal et.al (eds.) Supreme but not Infallible: Essays in Honour of the Supreme Court of India, New Delhi: Oxford University Press, pp. 107-133.

M. Singh, and R. Saxena (eds.), (2011) 'Towards Greater Federalization,' in Indian Politics: Constitutional Foundations and Institutional Functioning, Delhi: PHI Learning Private Ltd., pp.166-195.

V. Marwah, (1995) 'Use and Abuse of Emergency Powers: The Indian Experience', in B. Arora and D. Verney (eds.) Multiple Identities in a Single State: Indian Federalism in a ComparativePerspective, Delhi: Konark, pp. 136-159. Additional Reading:

The Constitution of India: Bare Act with Short Notes, (2011) New Delhi: Universal, pp. 4-16.

ভারতীয় সংবিধান (বাংলা সংস্করণ) দূর্গাদাস বসু – ভারতের সংবিধান পরিচয় সুভাষ সি কাশ্যপ – আমাদের সংবিধান (অনুবাদঃ পার্থ সরকার) অমল কুমার মুথোপাধ্যায় – ভারতীয় সংবিধানের সহজ পাঠ

Politics in India:Structures and ProcessesCode: PLS-A-CC-2-4-TH+TU

Module I:

1.Party system: features and trends – major national political parties in India: ideologies and programmes. Coalition politics in India: nature and trends. Political parties in West Bengal: Overview.

2.Electoral process: Election Commission: composition, functions, role. Electoral reforms.

3. Role of business groups, working class, peasants in Indian politics.

Module IV:

4.Role of (a) religion (b) language (c) caste (d) tribe.

5. Regionalism in Indian politics.

6. New Social Movements since the 1970s: (a) environmental movements (b) women's movements

(c) human rights movements.

Readings:

R. Kothari, (2002) 'The Congress System', in Z. Hasan (ed.) Parties and Party Politics in India, New Delhi: Oxford University Press, pp 39-55.

E. Sridharan, (2012) 'Introduction: Theorizing Democratic Consolidation, Parties and Coalitions', in Coalition Politics and Democratic Consolidation in Asia, New Delhi: Oxford University Press.

Y. Yadav and S. Palshikar, (2006) 'Party System and Electoral Politics in the Indian States, 1952-2002: From Hegemony to Convergence', in P. deSouza and E. Sridharan (eds.) India's Political Parties, New Delhi: Sage Publications, pp. 73-115.

R. Hardgrave and S. Kochanek: India: Government and Politics in a Developing Nation (Latest edition). S. Palshikar, (2008) 'The Indian State: Constitution and Beyond', in R. Bhargava (ed.) Politicsand Ethics of the Indian

Constitution, New Delhi: Oxford University Press, pp. 143-163.

Partha Chatterjee: State and Politics in India.

Sudipta Kaviraj ed.: Politics in India.

R. Kothari, (1970) 'Introduction', in Caste in Indian Politics, Delhi: Orient Longman, pp.3-25. M. Weiner, (2001) 'The Struggle for Equality: Caste in Indian Politics', in Atul Kohli (ed.) TheSuccess of India's Democracy, New Delhi: Cambridge University Press, pp. 193-225.

C. J. Nirmal ed.: Human Rights in India.

Y. Yadav, (2000) 'Understanding the Second Democratic Upsurge', in F. Frankel, Z. Hasan, and R. Bhargava (eds.)
Transforming India: Social and Political Dynamics in Democracy, New Delhi: Oxford University Press, pp. 120-145.
C. Jaffrelot, (2008) 'Why Should We Vote? The Indian Middle Class and the Functioning of World's Largest Democracy', in Religion, Caste and Politics in India, Delhi: Primus, pp. 604-619.

Deshpande, (2004) 'How Gendered was Women's Participation in Elections 2004?', Economic and Political Weekly, Vol. 39, No. 51, pp. 5431-5436.

Siddhartha Guha Roy: Human Rights, Democratic Rights and Popular Protest.

G. Shah: Social Movements in India.Raka Ray and M.F. Katzenstein eds.: Social Movements in India.

S. Corbridge and J. Harris: Reinventing India: Liberalization, Hindu nationalism and Popular Democracy.

Bipan Chandra et al.: India after Independence (1947-2000).

Rajni Kothari ed.: Caste in Indian Politics.

Bharati Ray and Aparna Basu eds.: From Independence to Freedom--- Indian Women since 1947.

Fields of Protest: Women's Movement in India.

D.N. Sen: From Raj to Swaraj.

R. Chatterjee ed.: Politics India--- State-Society Interface.

Sumit Ganguly et al. eds.: The State of India's Democracy.

Z. Hasan: Politics and Party Politics in India.

B.L. Shankar and V. Rodrigues: The Indian Parliament: A Democracy at Work.

Ashutosh Varshney: India and the Politics of Developing Countries.

Achin Vanaik and Rajiv Bhargava: Understanding Contemporary India: Critical Perspectives.

A. Kohli and P. Singh eds.: The Routledge Handbook of India Politics.

N.G. Jayal and P.B. Mehta eds.: The Oxford Companion to Politics in India.

Anil Jana ed., Decentralizing Rural Governance and Development.

Z. Hasan et al eds.: India's Living Constitution.

বিপান চন্দ্রঃ সমসাময়িক ভারত বিষয়ক নিবন্ধ (অনুবাদঃ দিলীপ ভট্টাচার্য্য)

বিপান চন্দ্র, মৃদুলা মুখার্জী, আদিত্য মুখার্জীঃ ভারতবর্ষ স্বাধীনতার পরে ১৯৪৭–২০০০ (অনুবাদঃ আশীষ লাহিড়ি) সত্যরত দত্ত: বাংলা বিধানসভার একশো বছর

শাশ্বতী ঘোষ: সমতার দিকে আন্দোলনে নারী

শুভেন্দু দাশগুপ্ত (সম্পা): প্রসঙ্গ মানবাধিকার

ভারতীয় সংবিধান (বাংলা সংস্করণ)

Semester III

Indian Political Thought- I Code: PLS-A-CC-3-5-TH+TU

Module I:

1 Ancient Indian Political ideas: overview.

2. Kautilya: Saptanga theory, Dandaniti, Diplomacy.

3. Medieval political thought in India: overview (with reference to Barani and Abul Fazal). Legitimacy of kingship.

4. Principle of Syncretism.

Module II:

5. Modern Indian thought: Rammohun Roy as pioneer of Indian liberalism – his views on rule of law, freedom of thought and social justice.

- 6. Bankim Chandra Chattopadhyay, Vivekananda and Rabindranath Tagore: views on nationalism.
- 7. M.K. Gandhi: views on State, Swaraj, Satyagraha.

Readings:

R.S. Sharma: Aspects of Political Ideas and Institutions in Ancient India. Saiyid Athar Abbas Rizvi – A History of Sufism in India (Vol.2) Amit Dey – Sufism in India V.R. Mehta: Foundation of Indian Political Thought. T. Pantham, and K. Deutsch (eds.), Political Thought in Modern India. A. Altekar, (1958) 'The Kingship', in State and Government in Ancient India, 3rd edition Advaita Ashram: Complete Works of Swami Vivekananda. U.N. Ghosal: The History of Hindu Political Theories. J. Bandopadhyay: Social and Political Thought of Gandhi D.D. Kosambi: Ancient India. Romila Thapar: From Lineages to State. K.A. Nizami ed.: Politics and Society during the Early Medieval Period. B. Bhattacharya: Evolution of the Political Philosophy of Gandhi. B.R. Nanda: Gandhi and His Critics. Partha Chatterjee: Nationalist Thought and the Colonial World. Rabindranath Tagore: Nationalism. Sudipta Kaviraj: The Unhappy Consciousness: Bankimchandra Chattopadhyay and the Formation of Nationalist Discourse in India. Bidyut Chakrabarty and R.K. Pandey: Modern Indian Political Thought--- Text and Context. সুধীন্দ্রনাথ ভৌমিক: নব্যবঙ্গে রাষ্ট্রচিন্তার ধারা ভারতী মুখার্জী: প্রাচীন ভারতের রাষ্ট্রনৈতিক চিন্তা নৃসিংহ প্রসাদ ভাদুডি: দণ্ডনীতি সত্যৱত চক্রবর্তী (সম্পা): ভারতবর্ষ: রাষ্ট্রভাবনা সুমিত সরকার: আধুনিক ভারত সরল চট্টোপাধ্যায়: ভারতীয় স্বাধীনতা সংগ্রামের ক্রমবিকাশ মনস্বিতা সান্যাল (অনু.): ভারতীয় জাতীয়তাবাদের সামাজিক পটভূমি (A R Desai: Social Background of Indian Nationalism-র অনুবাদ) দিলীপ কৃমার বিশ্বাস: রামমোহন সমীক্ষা তরুণ কুমার বন্দ্যোপাধ্যায়: নেতাজী সুভাষচন্দ্রের রাষ্ট্রদর্শন দেবজ্যোতি বন্দ্যোপাধ্যায়: রবীন্দ্রনাথের জাতীয়তাবাদ-বিরোধী স্বদেশপ্রেম

Module I:

1. Evolution of Comparative Politics. Scope, purposes and methods of comparison.

Distinction between Comparative Government and Comparative Politics.

2. Major approaches to the study of comparative politics---Institutional approach (dominant schools: Systems approach and Structural Functional approach)---limitations; New Institutionalism, Political Economy--- origin and key features.

3. Development and democratization: S.P. Huntington.

4. Classification of political systems. Nature of liberal and socialist political systems; distinguishing features--conventions, rule of law (UK), separation of powers, checks and balances, judicial review (USA), democratic centralism (PRC), referendum, initiative (Switzerland).

5. Political Parties: Typology, features and roles (UK, USA, PRC and Bangladesh). Interest groups: roles (UK and USA).

Module II:

6. Unitary system: UK, Bangladesh. Federal system: USA, Russia.

7. Legislature in UK, USA and PRC: composition and functions of legislative chambers; Committee System in UK and USA

8. Executive in UK, USA, France and Russia: A comparative study of (i) Russian, French and American Presidency; (ii) British and French cabinet systems.

9. Judiciary in UK, USA and PRC (with focus on the Procuratorate): comparative study.

10. Rights of the citizens of UK, USA and PRC: A comparative study.

Readings:

Gabriel Almond et al eds.: Comparative Politics Today: A World View (latest edition).

J. Kopstein and M. Lichbach (eds.) Comparative Politics:Interest, Identities and Institutions in a Changing Global Order. Subrata Mukherjee and S. Ramaswamy: Theoretical Foundations of Comparative Politics.

J. Bara and M Pennington eds.: Comparative Politics.

J. Kopstein and H. Lichbach eds. : Comparative Politics.

J. Harvey and S. Bather: The British Constitution.

J. Wilson: American Government.

S.E. Finer: Comparative Government.

J. Blondel: An Introduction to Comparative Politics.

The Constitution of People's Republic of China.

J. Gittings: China Changes Face: The Road from Revolution 1949-89.

S. Boyron: The Constitution of France: A Contextual Analysis.

M. Burgess: Comparative Federalism: Theory and Practice.

J. McCormick, Jr.: Comparative Politics in Transition.

R. Chatterjee: Introduction to Comparative Political Analysis.

N.K. Singh: Bangladesh--- Constitution, Law and Justice.

J. Henderson: Constitution of the Russian Federation: A Contextual Analysis.

S. P. Huntington: The Third Wave: Democratization in the Late Twentieth Century.

M. Duverger: Political Parties.

রাখহরি চ্যাটার্জীঃ তুলনামূলক রাজনীতিপরিচয় অমিতাভ রায় (সম্পা): তুলনামূলক রাজনীতি রাজশ্রী বসু (সম্পাদিত)-তুলনামূলক শাসনব্যবস্থা ও রাজনীতি পঞ্চানন চট্টোপাধ্যায়: ফ্রান্সের সাধারণতন্ত্র

Perspectives on International RelationsCode: PLS-A-CC-3-7-TH+TU

Module I:

- 1. Understanding International Relations: outline of its evolution as academic discipline.
- 2. Major theories: (a) Classical Realism and Neo-Realism (b) Dependency (c) World Systems theory.
- 3. Emergent issues: (a) Development (b) Environment (c) Terrorism (d) Migration.

Module II:

- 4. Making of foreign policy.
- 5. Indian foreign policy: major phases: 1947-1962; 1962-1991; 1991-till date.
- 6. Sino-Indian relations; Indo-US relations.

Readings:

- M. Nicholson, International Relations: A Concise Introduction, New York: Palgrave.
- Jackson and G. Sorensen, Introduction to International Relations: Theories and Approaches, 3rd Edition.
- Joshua. Goldstein and J. Pevehouse, (2007) International Relations.
- C. Brown and K. Ainley, (2009) Understanding International Relations
- H.J. Morgenthau: Politics among Nations.
- K. Booth and S. Smith, (eds), International Relations Theory Today
- S.H. Hoffman: Essays in Theory and Politics of International Relations.
- K.J. Holsti: International Politics: A Framework for Analysis.
- J. Frankel: The Making of Foreign Policy.
- J. Frankel: Contemporary International Theory and Behaviour of States.
- J. Bennett: International Organizations.
- J. Bandopadhyay: The Making of India's Foreign Policy.
- D.A. Baldwin ed.: Neo-realism and Neo-liberalism.
- M. Smith and R. Little: Perspectives on World Politics.
- P.R. Viotti and M.V. Kauppi: International Relations and World Politics.
- Muchkund Dubey: India's Foreign Policy: Coping with the Changing World.
- Peu Ghosh: International Relations.
- S.D. Muni: Indian Foreign Policy: The Democracy Dimension.
- K.P. Bajpai and H.V. Panth: India's Foreign Policy--- A Reader.
- Sumit Ganguly: India's Foreign Policy: Retrospect and Prospect.
- V. P. Dutt: India's Foreign Policy since Independence.
- V.P. Dutt: Indian Foreign Policy in a Changing World.

পুরুষোত্তম ভট্টাচার্য ও অনিন্দ্যজ্যোতি মজুমদার (সম্পা.): আন্তর্জাতিক সম্পর্কের রূপরেখা গৌতম বসু: আন্তর্জাতিক সম্পর্ক: তত্ব ও বিবর্তন

Semester IV

Indian Political Thought IICode: PLS-A-CC-4-8-TH+TU

Module I:

- 1. M.N. Roy: Radical Humanism.
- 2. Narendra Deva, Ram Manohar Lohia, Jayaprakash Narayan: Socialist ideas
- 3. Syed Ahmed Khan and Iqbal: views on colonialism and nationalism.

Module II:

4. Nehru: views on Socialism and Democracy. Subhas Chandra Bose: views on Socialism and Fascism.

- 5. Contested notions of 'nation'--- Savarkar, Jinnah.
- 6. Jyotiba Phule and Ambedkar on caste system and untouchability. Pandita Ramabai's views on social justice

Readings:

V. R. Mehta and T. Pantham (eds.), 'A Thematic Introduction to Political Ideas in ModernIndia: Thematic Explorations, History of Science, Philosophy and Culture in Indian civilization, Vol. 10, Part: 7, pp. xxvii-ixi.

V. Mehta and Th. Pantham (eds.), Political ideas in modern India: Thematic Explorations

S. Hay (ed.), Sources of Indian Tradition, Vol. 2. Second Edition.

T. Pantham and K.L. Deutsch: Political Thought in Modern India.

Sumit Sarkar: Modern India.

Bipan Chandra: Nationalism and Colonialism in Modern India.

A. Parel, (ed.), 'Introduction', in Gandhi, freedom and Self Rule

D. Dalton, (1982) 'Continuity of Innovation', in Indian Idea of Freedom: Political Thought of Swami Vivekananda,

Aurobindo Ghose, Rabindranath Tagore and Mahatma Gandhi.

- J. Nehru: Discovery of India.
- B. Zachariah, Nehru.
- S. Thorat and Aryana eds.: Ambedkar in Retrospect.

J. Sharma, (2003) Hindutva: Exploring the Idea of Hindu Nationalism

Y. Meherally ed.: Narendra Deva: Socialism and National Revolution.

Ramchandra Guha: India after Gandhi.

Uma Chakrabarti: Rewriting History: The Life and Times of Pandita Ramabai.

B. K. Bhattacharya ed., Salient Ideas of Rammonohar Lohia.

Bidyut Chakrabarty and R.K. Pandey: Modern Indian Political Thought--- Text and Context.

Global Politics since 1945Code: PLS-A-CC-4-9-TH+TU

Module I:

1. Cold War and its evolution: outline.Emergence of Third World: NAM; Pan Africanism. Post-Cold War world: overview. Globalization: conceptions and perspectives.

2. Europe in transition: European Union, Brexit (overview).

3. Major institutions of global governance: World Bank, IMF, WTO--- overview. Major regional organizations: ASEAN, OPEC, SAFTA, SAARC and BRICS. West Asia and the Palestine question.

Module II:

4. India and her neighbours I: Pakistan; Bangladesh.

5. India and her neighbours II: Nepal; Bhutan; Sri Lanka.

6. UNO: background; Major organs--- General Assembly, Security Council and Secretariat (with focus on Secretary General). Role of UNO in peace-keeping, human rights, and development (Millennium Development Goals and Sustainable Development Goals).

Readings:

P. Calvocoressi: World Politics since 1945 (latest edition). R. Mansbach and K. Taylor, (2012) Introduction to Global Politics J. Baylis and S. Smith (eds), The Globalization of World Politics: An Introduction to International Relations. G. Ritzer: Globalization--- A Basic Text. J.A. Moore, Jr. and J. Pubantz: The New United Nations. S. Juval and B. Ramesh Babu: The United Nations and World Peace. K. Bajpai and H.C. Shukul eds.: Interpreting World Politics. J. Baylis and S. Smith: The Globalization of World Politics. L.M. Goodriche: The UN in Changing World. M.S. Rajan: Essays in Non-Alignment and UN. Alvin Y. So: Development and Social Change. J. Haynes: Third World Politics. Ankie Hoogvelt: Globalization and the Postcolonial World N.O. Sullivan ed.: Terrorism, Ideology and Revolution. D. Navyar: Governing Globalization. G. Ritzer: Globalization--- A Basic Text. S.D. Muni: Responding to Terrorism in South Asia. Peter Burnel: Politics in the Developing World. B.C. Smith: Understanding Third World Politics. Björn Hettne: Development Theory and the Three Worlds.

রাধারমণ চক্রবর্তী ও সুকল্পা চক্রবর্তী: সমসাময়িক আন্তর্জাতিক সম্পর্ক পুরুষোত্তম ভট্টাচার্য ও অনিন্দ্যজ্যোতি মজুমদার (সম্পা.):আন্তর্জাতিক সম্পর্কের রূপরেখা গৌতম বসু: আন্তর্জাতিক সম্পর্ক: তত্ব ও বিবর্তন অনীক চট্টোপাধ্যায়: ঠাণ্ডাযুদ্ধের পর আন্তর্জাতিক সম্পর্ক

WESTERN POLITICAL THOUGHT AND THEORY I

Code: PLS-A-CC-4-10-TH+TU

Module I:

1. Greek political thought: main features – Plato: justice, communism – Aristotle: state, classifications of constitutions.

- 2. Roman political thought: theories of Law and Citizenship contributions of Roman thought.
- 3. Medieval political thought in Europe: major features.

4. Contribution of Machiavelli. Significance of Renaissance. Political thought of Reformation.

Module II:

- 5. Bodin: Idea of Sovereignty.
- 6. Hobbes: founder of science of materialist politics.

- 7. Locke: founder of Liberalism. views on natural rights, property and consent.
- 8. Rousseau: views on freedom and democracy.

Readings:

- A.Skoble and T. Machan: Political Philosophy: Essential Selections.
- D. Boucher and P. Kelly, (eds) Political Thinkers: From Socrates to he Present
- G. H. Sabine and T.I. Thorson: A History of Political Theory.
- D. Boucher and P. Kelly: Political Thinkers: From Socrates to the Present.
- S. Mukherjee and S. Ramaswamy: A history of Political Thought: From Plato to Marx.
- R.G. Gettell: History of Political Thought.
- B. Barker: The Political Thought of Plato and Aristotle.
- Q. Skinner: Machaivelli: A Very Short Introduction.
- A.K. Mukhopadhyay: Western Political Thought: from Plato to Marx.

Semester V

WESTERN POLITICAL THOUGHT AND THEORY II

Code: PLS-A-CC-5-11-TH+TU

Module I:

1. Bentham: Utilitarianism. John Stuart Mill: views on liberty and representative government.

- 2. Hegel: Civil Society and State.
- 3. T. H. Green: Freedom, Obligation.

Module II:

- 4. Utopian and Scientific Socialism: basic characteristics.
- 5. Varieties of non-Marxist socialism: Fabianism, Syndicalism, Guild Socialism.
- 6. Anarchism: overview.
- 7. Cultural Marxism: Frankfurt School (overview). Post-Marxism: emergence and basic contentions.

Readings:

- A.Skoble and T. Machan: Political Philosophy: Essential Selections.
- D. Boucher and P. Kelly, (eds) Political Thinkers: From Socrates to he Present
- G. H. Sabine and T.I. Thorson: A History of Political Theory.
- D. Boucher and P. Kelly: Political Thinkers: From Socrates to the Present.
- S. Mukherjee and S. Ramaswamy: A history of political Thought: From Plato to Marx.
- R.G. Gettell: History of Political Thought.
- Q. Skinner: The Foundations of Modern Political Thought (2 Volumes).
- A.K. Mukhopadhyay: Western Political Thought: from Plato to Marx.
- C.E.M. Joad: Political Theory.
- L. Kolakowski: Main Currents of Marxism (3 Volumes).
- D.K. Das and T. Chattopadhyay: Varieties of Socialism.
- D. McLellan: The Thought of Karl Marx.
- D. McLellan: Marxism after Marx.

S. Mukherjee and S. Ramaswamy: A History of Socialist Thought. Frankfurt School: Internet Encyclopedia of Philosophy, http://www.iep.utm.edu/frankfur/

শোভনলাল দত্তগুশ্ব (সম্পা.:পাশ্চাত্য রাষ্ট্রভাবনা) অমল কুমার মুথোপাধ্যায়: রাষ্ট্রদর্শনের ধারা রামকৃষ্ণ ভট্টাচার্য: মার্কসবাদ জিজ্ঞাসা অমৃতাত বন্দ্যোপাধ্যায়: পাশ্চাত্য রাষ্ট্রচিন্তার ইতিহাস সুদীপ্ত দে: গণরাজ্য (প্লেটোর Republic র অনুবাদ) নির্মলকান্তি মজুমদার: এ্যারিস্টটলের Politics –র অনুবাদ সুনীল বরণ বিশ্বাস: ম্যাকিয়াভেলীর Prince –র অনুবাদ হিমাংশ্ড ঘোষ: রাজনৈতিক তত্বের ইতিহাস (J H Sabine র ভাষান্তর) শোভনলাল দত্তগুগ্ত: মার্কসীয় রাষ্ট্রচিন্তা–মার্কস থেকে মাও সে তুং

Political SociologyCode: PLS-A-CC-5-12-TH+TU

Module I:

1. Social bases of politics. Emergence of Political Sociology.

- 2. Political culture and Political socialization: nature, types and agencies.
- 3. Political participation: concept and types.
- 4. Political development and social change.
- 5. Political Communication: Concept and structures.

Module II:

- 6. Social stratification and politics: caste, tribe, class, elite.
- 7. Gender and politics: basic issues.
- 8. Religion and politics: varying perspectives.
- 9. Military and politics: conditions and modes of intervention.
- 10. Electorate and electoral behaviour (with special reference to the Indian context).

Readings:

Michael Rush: Politics and Sociology.
B. Axford et al.: Politics--- An Introduction.
Tom Bottomore: Political Sociology.
Amal K. Mukhopadhyay: Political Sociology.
S. Chakraborty ed.: Political Sociology.
Tom Bottomore: Classes in Modern Society.
R. Chatterjee ed.: Religion, Politics and Communalism.
B. Lindenfeld ed.: Reader in Political Sociology.
Pradip Basu (ed.) – Political Sociology
J. Forbes: Women in Modern India.
M. Evans ed.: The Women Question.
P. Worsley: The Three Worlds: Culture and World Development.
Samuel Huntington: Political Order in a Changing Society.
G.A. Almond and J.S. Coleman eds.: The Politics of Developing Areas.

J. Manor: Rethinking Third World Politics.

J. Kantola et al eds.: The Oxford Handbook of Gender Politics.

J. Blondel: Comparative Government.

G.A. Almond and G.B. Powell, Jr.: Comparative Politics: A Developmental Approach.

S. Oates: Introduction to Media and Politics.

টম বটমোরঃ মার্ক্সীয় সমাজতত্ব (অনুবাদঃ হিমাংশু ঘোষ); সত্যরত চক্রবর্তীঃ রাষ্ট্র, সমাজ ও রাজনীতি

Semester VI

Public Administration-- Concepts and PerspectivesCode: PLS-A-CC-6-13-TH+TU

Module I:

1. Nature, Scope and Evolution of Public Administration – Private and Public Administration. Principles of Socialist Management.

2. Challenges to discipline of Public Administration and responses: New Public Administration, Comparative Public Administration, Development Administration (Indian context).

3. Major concepts of administration: (a) Hierarchy (b) Unity of Command (c) Span of Control (d) Authority (e) Centralization, Decentralization and Delegation (f) Line and Staff.

4. Public Administration in the era of globalization, liberalization and privatization. Governance: conceptual emergence--- distinction with government. e-governance: features and significance.

Module II:

5. Bureaucracy: views of Marx and Weber.

6. Ecological approach to Public Administration: Riggsian Model.

- 7. Administrative Processes: (a) Decision making (b) Communication and Control (c) Leadership (d) Coordination.
- 8. Public Policy: definition, characteristics. Models. Policy implementation.

Readings:

Nicholas Henry: Public Administration and the State.

W. Wilson, (2004) 'The Study of Administration', in B. Chakrabarty and M. Bhattacharya (eds), Administrative Change and Innovation: a Reader, New Delhi: Oxford University Press, pp. 85-101

Mohit Bhattacharya: Public Administration: Structure, Process and Behaviour.

M. Bhattacharya, Public Administration: Issues and Perspectives.

A. Avasthi and S. Avasthi: Pubic Administration.

- M. Bhattacharya: Restructuring Public Administration.
- B. Chakrabarty: Public Administration: From Government to Governance.
- B. Chakrabarty and M. Bhattacharya eds.: Pubic Administration: A Reader.

B. Chakrabarty and M. Bhattacharya eds.: The Governance Discourse.

Shivani Singh: Governance: Issues and Challenges.

M.P. Sharma: Public Administration in Theory and Practice.

Rumki Basu: Public Administration: Concepts and Theories.

- G.H. Frederickson: New Public Administration.
- R. Prasad et al. eds.: Administrative Thinkers.

S.R. Maheswari: Administrative Theory.

Ramesh Arora: Comparative Public Administration.

R.K. Sapru: Development Administration.

M. Bhattacharya: New Horizons of Public Administration.

T. Dye, (1984) Understanding Public Policy, 5th Edition.

Xun Wu, M.Ramesh, Michael Howlett and Scott Fritzen, The Public Policy Primer: ManagingThe Policy Process. Prabir Kumar De, *Public Policy and Systems*,

B. Chakrabarty and P. Chand: Public Administration in a Globalizing World: Theories and Practices.

U. Medury, Public administration in the Globalisation Era.

Additional Reading: The Oxford Handbook of Public Policy.

Administration and Public Policy in IndiaCode: PLS-A-CC-6-14-TH+TU

Module I

1. Continuity and change in Indian administration: brief historical overview.

- 2. Civil Service in India (Bureaucracy): recruitment (role of UPSC, SPSC), training.
- 3. Organization of Union Government: Secretariat Administration: PMO, Cabinet Secretariat.
- 4. Organization of State Government: Chief Secretary relations between Secretariat and Directorate.
- 5. District Administration: role of District Magistrate, SDO, BDO.

Module II:

6.Local Self Government: Corporations, Municipalities and Panchayats in West Bengal, structure and functions. 73rd and 74th Amendment: overview.

7. Planning: Planning Commission, National Development Council. District Planning. Changing nature of planning: NITI Ayog. Budget--- concept and significance.

8. Financial Administration: Public Accounts Committee, Estimates Committee – role of CAG.

9. Citizen and administration: functions of Lokpal and Lokayukt. Right to Information--- Citizen Charter.
 10. Citizen and social welfare policies: MGNREGA; Sarva Shiksha Abhiyan (SSA); National Health Mission (NRHM).

Readings:

Bidyut Chakrabarty, Reinventing Public Administration: The Indian Experience.

- S. R. Maheswari: Indian Administration.
- R.B. Jain: Contemporary Issues in Indian Administration.
- B. Chakrabarty and P. Chand: Indian Administration.

Noorjahan Bava, Development Policies and Administration in India.

Satyajit Singh and Pradeep K. Sharma [eds.] Decentralisation: Institutions and Politics inRural India.

Basu Rumki: Public Administration in India Mandates, Performance and FuturePerspectives.

A.Celestine: How to Read the Union Budget PRS, Centre for Policy Research, New Delhi, Available

at http://www.prsindia.org/parliamenttrack/primers/how-to-read-the-union-budget-1023/

Primer on the Budget Process published by PRS, Available

athttp://www.prsindia.org/parliamenttrack/primers/the-budget-process-484/

R.V. Vaidyanatha Ayyar, Public Policy Making In India, Pearson.

B. Chakrabarty and P. Chand: Public Policy: Concepts, Theory and Practice.
S. Singh and P. Sharma: Decentralization: Institutions and Politics in Rural India.
Anil Jana ed.: Decentralizing Rural Governance and Development.
P. Datta: Panchayats, Rural Development and Local Autonomy: the West Bengal Experience.
A. Mukhopadhyay: Panchayat Administration in West Bengal.

For both Courses 13 and 14:

মোহিত ভট্টাচার্য ও বিশ্বনাথ ঘোষ: জনপ্রশাসন ও পরিকল্পনা সোমা ঘোষ: জনপ্রশাসন: তত্ব ও প্রয়োগ রাজশ্রী বসু: জনপ্রশাসন পদ্মা রামচন্দ্রনঃ ভারতে সরকারী প্রশাসন (অনুবাদঃ সন্তোষ কুমার অধিকারী) অসিত বসু: পশ্চিমবঙ্গে পঞ্চায়েত ব্যবস্থা প্রভাত দত্ত: প্রসঙ্গ পঞ্চায়েত

Guidelines:

i) For very contemporary topics, such as, NITI Ayog and MGNREGA, the respective official websites may be consulted.

ii) For supplementary readings, relevant reputed websites of recognized academic credential may be legally accessed.

iii) Bengali books cited in a particular course may be used in another *related* course, if found relevant.

University of Calcutta

Final Draft BA (Honours)-CBCS Syllabus in Political Science, 2018 (Section II)

Discipline- specific Elective Category: 4 courses (8 courses provided). One from Group A and one from Group B in Semesters 5 and one from Group A and one from Group B in Semester 6.

Generic Elective Category: 4 courses (Core Courses of the General Syllabus from a subject other than Political Science. <u>Not provided here.</u>)

Each DSE and GE course: 6 credits (5 theoretical segment+ 1 for tutorial-related segment). **Skill Enhancement/Skill-based Category: 2 courses**(4 courses provided). Each Course: 2 credits. Theoretical only (no Tutorial). Any one course from Group A in Semester 3 and any one course from Group B in Semester 4.

Ability Enhancement Compulsory Category:2 courses: Common for all. <u>Not provided</u> <u>here.</u>

- Each course carries 80 marks ^combining theoretical and tutorial segments (plus 10 marks each for Attendance and Continuous Internal Assessment).
- 6 credit course: <u>Minimum</u> 30 classes for Theory and 15 contact hours for Tutorial <u>per</u> <u>module</u>. 2 credit course: 30 teaching/lecture hours in total.

^End Semester Assessment--- 65 marks for theoretical segment: 50 marks for subjective/descriptive questions + 15 marks for 1 mark-questions. <u>Question Pattern</u> for subjective/descriptive segment of 50 marks: 2 questions (within 100 words; one from each module) out of 4 (10 x2 = 20) + 2 questions (within 500 words; one from each module) out of 4 (15 x 2 = 30).>>For Skill Enhancement Courses the last component would carry 6 questions--- 15 marks each--- out of which 3 (at least one from each module) to be attempted because such courses have no Tutorial.

- 15 marks for tutorial-related segments as suggested below (any one item from each mode): i) <u>Written mode</u>: upto 1000 words for one Term Paper/upto 500 words for each of the two Term Papers/ equivalent Book Review/equivalent Comprehension/equivalent Quotation or Excerpt Elaboration. ii) <u>Presentation Mode</u>: Report Presentation/Poster Presentation/Field work--- based on syllabus-related and/or current topics (May be done in groups) [The modes and themes and/or topics are be decided by the concerned faculty members of respective colleges.]
- Discipline-specific: 2 each (one from Group A and one from Group B) in Semesters 5 and 6.
- Generic Elective: 1 each in Semesters 1-4.<>Skill Enhancement: 1 each in Semesters 3 and 4.

IMPORTANT NOTES:

 The Readings provided below include many of those of the UGC Model CBCS Syllabus in Political Science. For Course Objectives and references it is advised that the UGC model CBCS syllabus* concerning relevant courses and topics be provided due importance and primarily consulted. *Website: BA Political Science (Honours): https://www.ugc.ac.in/pdfnews/2085906_B.A-Hons.-Pol-Science.pdf

- Cited advanced texts in Bengali are not necessarily substitutes, but supplementary to English books.
- Paper Code Format: Subject Code-Course Code-Semester Code-Paper Number-Paper Component.
- The format is strictly subject to the parameters of the common structural format of CU CBCS.

Honours in Political Science

List of Discipline-specific Elective Courses:

- Gender and Politics
- Understanding South Asia
- Indian Foreign Policy in a Globalising World
- Development Process and Social Movements in Contemporary India
- Public Policy in India
- Understanding Global Politics
- Citizenship in a Globalising World
- Human Rights in a Comparative Perspective

List of Skill Enhancement Courses:

- Democratic Awareness through Legal Literacy
- Understanding the Legal System
- Legislative Practices and Procedures
- Elementary Aspects of Social Research

Gender and Politics

Code: PLS-A-DSE-5-A(1)-TH+TU

Module I

- I. Groundings
- 1. Patriarchy
- a. Sex-Gender Debates
- b. Public and Private
- c. Power
- 2. Feminism
- 3. Family, Community, State
- a. Family
- b. Community
- c. State

Module II

- II. Movements and Issues
- 1. History of the Women's Movement in India
- 2. Violence against women
- 3. Work and Labour
- a. Visible and Invisible work
- b. Reproductive and care work
- c. Sex work

Readings:

- I. Groundings
- 1. Patriarchy

T. Shinde, (1993) 'Stree Purusha Tulna', in K. Lalitha and Susie Tharu (eds), *Women Writingin India*, New Delhi, Oxford University Press, pp. 221-234.

a. Sex Gender Debates

Readings:

- V Geetha, (2002) Gender, Kolkata, Stree, pp. 1-20
- b. Public and Private

Readings:

M. Kosambi, (2007) Crossing the Threshold, New Delhi, Permanent Black, pp. 3-10; 40-46

c. Power

Readings:

N. Menon, (2008) 'Power', in R. Bhargava and A. Acharya (eds), *Political Theory: AnIntroduction*, Delhi: Pearson, pp.148-157

2. Feminism

Readings:

B. Hooks, (2010) 'Feminism: A Movement to End Sexism', in C. Mc Cann and S. Kim (eds), *The Feminist Reader: Local and Global Perspectives*, New York: Routledge, pp. 51-57
R. Delmar, (2005) 'What is Feminism?', in W. Kolmar & F. Bartkowski (eds) *Feminist Theory: A Reader*, pp. 27-37
3.Family, Community and State a.Family

Readings:

R. Palriwala, (2008) 'Economics and Patriliny: Consumption and Authority within the Household' in M. John. (ed) *Women's Studies in India*, New Delhi: Penguin, pp. 414-423 b. Community

Readings:

U. Chakravarti, (2003) *Gendering Caste through a Feminist Len,* Kolkata, Stree, pp. 139-159. c. State

C. MacKinnon, 'The Liberal State' from *Towards a Feminist Theory of State,* Available at

http://fair-use.org/catharine-mackinnon/toward-a-feminist-theory-of-the-state/chapter-8,

Accessed: 19.04.2013.

Additional Readings:

K. Millet, (1968) Sexual Politics, Available at

http://www.marxists.org/subject/women/authors/millett-kate/sexual-politics.htm, Accessed: 19.04.2013.

N. Menon (2008) 'Gender', in R. Bhargava and A. Acharya (eds), *Political Theory: AnIntroduction*, New Delhi: Pearson, pp. 224-233

R. Hussain, (1988) 'Sultana's Dream', in *Sultana's Dream and Selections from the SecludedOnes – translated by Roushan Jahan,* New York: The Feminist Press

S. Ray 'Understanding Patriarchy', Available at

http://www.du.ac.in/fileadmin/DU/Academics/course_material/hrge_06.pdf, Accessed:

19.04.2013.

S. de Beauvoir (1997) Second Sex, London: Vintage.

Saheli Women's Centre, (2007) *Talking Marriage, Caste and Community: Women's Voicesfrom Within,* New Delhi: monograph

II. Movements and Issues

1. History of Women's Movement in India

Readings:

I. Agnihotri and V. Mazumdar, (1997) 'Changing the Terms of Political Discourse: Women's Movement in India, 1970s-1990s', *Economic and Political Weekly*, 30 (29), pp. 1869-1878.

R. Kapur, (2012) 'Hecklers to Power? The Waning of Liberal Rights and Challenges to Feminism in India', in A. Loomba *South Asian Feminisms*, Durham and London: Duke University Press, pp. 333-355

2. Violence against Women

Readings:

N. Menon, (2004) 'Sexual Violence: Escaping the Body', in *Recovering Subversion*, New Delhi:Permanent Black, pp. 106-165

3. Work and Labour

a. Visible and Invisible work

Readings:

P. Swaminathan, (2012) 'Introduction', in Women and Work, Hyderabad: Orient Blackswan,pp.1-17

b. Reproductive and care work

Reading:

J. Tronto, (1996) 'Care as a Political Concept', in N. Hirschmann and C. Stephano, *Revisioningthe Political*, Boulder: Westview Press, pp. 139-156

c. Sex work

Readings:

Darbar Mahila Samanwaya Committee, Kolkata (2011) 'Why the so-called Immoral Traffic(Preventive) Act of India Should be Repealed', in P. Kotiswaran, *Sex Work,* New Delhi, Women Unlimited, pp. 259-262 N. Jameela, (2011) 'Autobiography of a Sex Worker', in P. Kotiswaran, *Sex Work,* New Delhi:Women Unlimited, pp. 225-241

Additional Readings:

C. Zetkin, 'Proletarian Woman', Available at http://www.marxists.org/archive/zetkin/1896/10/women.htm, Accessed: 19.04.2013. F. Engles, Family, Private Property and State, Available at http://readingfromtheleft.com/PDF/EngelsOrigin.pdf, Accessed: 19.04.2013. J. Ghosh, (2009) Never Done and Poorly Paid: Women's Work in Globalising India, Delhi: Women Unlimited Justice Verma Committee Report, Available at http://nlrd.org/womens-rightsinitiative/ justice-verma-committee-report-download-full-report, Accessed: 19.04.2013. N. Gandhi and N. Shah, (1992) Issues at Stake – Theory and Practice in the Women's Movement, New Delhi: Kali for Women. V. Bryson, (1992) Feminist Political Theory, London: Palgrave-MacMillan, pp. 175-180; 196-200. M. Mies, (1986) 'Colonisation and Housewifisation', in Patriarchy and Accumulation on a World Scale London: Zed, pp. 74-111, Available at http://caringlabor.wordpress.com/2010/12/29/maria-mies-colonization-andhousewifization/, R. Ghadially, (2007) Urban Women in Contemporary India, Delhi: Sage Publications. S. Brownmiller, (1975) Against our Wills, New York: Ballantine. Saheli Women's Centre (2001) 'Reproductive Health and Women's Rights, Sex Selection and feminist response' in S Arya, N. Menon, J. Lokneeta (eds), Nariwadi Rajneeti, Delhi, pp. 284-306.

V. Bryson (2007) *Gender and the Politics of Time,* Bristol: Polity Press.

Understanding South Asia

Code: PLS-A-DSE-5-A(2)-TH+TU

Module I

I. South Asia- Understanding South Asia as a Region

(a) Historical and Colonial Legacies

(b) Geopolitics of South Asia

II. Politics and Governance

Regime types: democracy, authoritarianism, monarchy

(b) Emerging constitutional practices: forms of government in India, Nepal, Bhutan, Sri Lanka and Pakistan

Module II

III. Socio-Economic Issues

(a) Identity politics: challenges and impacts (case studies of

India, Nepal, Sri Lanka)

IV. Regional Issues and Challenges

(a) South Asian Association for Regional Cooperation (SAARC): problems and prospects

(b)Terrorism: Political and Social Consequences in South Asia;

(c) Refugee crisis.

Readings:

Hewitt, V. (1992) 'Introduction', in The International Politics of South Asia. Manchester: Manchester University Press, pp.1-10. Hewitt, V. (2010) 'International Politics of South Asia' in Brass, P. (ed.) Routledge Handbook of South Asian Politics. London: Routledge, pp.399-418.

Muni, S.D. (2003) 'South Asia as a Region', South Asian Journal, 1(1), August-September, pp.

1-6

Baxter, C. (ed.) (1986) The Government and Politics of South Asia. London: Oxford University Press, pp.376-394.

Baxter, C. (2010) 'Introduction', Brass, P. (ed.) Routledge Handbook of South Asian Politics. London: Routledge, pp.1-24

II. Politics and Governance

De Silva, K.M. (2001)'The Working of Democracy in South Asia', in Panandikar, V.A (ed.) Problems of Governance in South Asia. New Delhi: Centre for Policy Research & Konark Publishing House, pp. 46-88.

Wilson, J. (2003) 'Sri Lanka: Ethnic Strife and the Politics of Space', in Coakley, J. (ed.) The Territorial Management of Ethnic Conflict. Oregon: Frank Cass, pp. 173-193.

Mendis, D. (2008) 'South Asian Democracies in Transition', in Mendis, D. (ed.) Electoral Processes and Governance in South Asia. New Delhi: Sage, pp.15-52.

Subramanyam, K. (2001) 'Military and Governance in South Asia', in V.A (ed.) Problems of Governance in South Asia. New Delhi: Centre for Policy Research & Konark Publishing House, pp.201-208.

Hachethi, K. and Gellner, D.N.(2010) 'Nepal : Trajectories of Democracy and Restructuring of the State', in Brass, P. (ed.) Routledge Handbook of South Asian Politics. London: Routledge, pp. 131-146.

Kukreja, V. 2011. 'Federalism in Pakistan', in Saxena R. (ed.) Varieties of Federal Governance. New Delhi: Foundation Books, pp. 104-130.

Jha, N.K. (2008) 'Domestic Turbulence in Nepal: Origin, Dimensions and India's Policy Options', in Kukreja, V. and Singh, M.P. (eds.) Democracy, Development and Discontent in South Asia. New Delhi: Sage, pp. 264-281.

Burki, S.J. (2010) 'Pakistan's Politics and its Economy', in Brass, P. (ed.) Routledge Handbook of South Asian Politics. London: Routledge, pp. 83-97.

Kaul, N. (2008) 'Bearing Better Witness in Bhutan', Economic and Political Weekly, 13 September, pp. 67-69.

III. Socio-Economic Issues

Phadnis, U.(1986) 'Ethnic Conflicts in South Asian States', in Muni, S.D. et.al. (eds.) Domestic Conflicts in South Asia : Political, Economic and Ethnic Dimensions. Vol. 2. New Delhi: South Asian Publishers, pp.100-119.

Kukreja, V. (2003) Contemporary Pakistan. New Delhi: Sage, pp. 75-111 and 112-153.

IV. Regional Issues and Challenges

Narayan, S. (2010) 'SAARC and South Asia Economic Integration', in Muni, S.D. (ed.) Emerging dimensions of SAARC. New Delhi: Foundation Books, pp. 32-50. Muni, S.D. and Jetley, R. (2010) 'SAARC prospects: the Changing Dimensions', in Muni, S.D. (ed.) Emerging dimensions of SAARC. New Delhi: Foundation Books, pp. 1-31. Baral, L.R. (2006) 'Responding to Terrorism: Political and Social Consequences in South Asia', in Muni, S.D. (ed.) Responding to terrorism in South Asia. New Delhi: Manohar, pp.301-332. Muni, S.D. (2006) 'Responding to Terrorism: An Overview', in Muni, S.D. (ed.) Responding to terrorism in South Asia. New Delhi: Manohar, pp.453-469. Hoyt, T.D. (2005) 'The War on Terrorism: Implications for South Asia', in Hagerty, D.T. (ed.) South Asia in World Politics. Lanham: Roman and Littlefield Publishers, pp.281-295.

Lama, M. (2003) 'Poverty, Migration and Conflict: Challenges to Human Security in South

Asia', in Chari, P.R. and Gupta, S. (eds.) Human Security in South Asia: Gender, Energy, Migration and Globalisation. New Delhi: Social Science Press, pp. 124-144

Acharya, J. and Bose, T.K. (2001) 'The New Search for a Durable Solution for Refugees: South Asia', in Samaddar, S. and Reifeld, H. (eds.) Peace as Process: Reconciliation and Conflict Resolution in South Asia. New Delhi: Vedams ,pp-137-157

Additional Readings

Baxter, C. (ed.) (1986) The Government and Politics of South Asia. London: Oxford University Press.

Rizvi, G. (1993) South Asia in a Changing International Order. New Delhi: Sage. Thakur, R. and Wiggin, O.(ed.) (2005) South Asia and the world. New Delhi: Bookwell. Hagerty, D.T.(ed.) (2005) South Asia in World Politics, Oxford: Rowman and Littlefield. Samaddar, R. (2002) 'Protecting the Victims of Forced Migration: Mixed Flows and Massive Flows', in Makenkemp, M. Tongern, P.V. and Van De Veen, H. (eds.) Searching for Peace in Central and South Asia. London: Lynne Reinner. Kukreja, V. and Singh, M.P. (eds) (2008) Democracy, Development and Discontent in SouthAsia. New Delhi: Sage.

Indian Foreign Policy in a Globalising World

Code: PLS-A-DSE-5-B (1)-TH+TU

Module I

I. India's Foreign Policy: From a Postcolonial State to an Aspiring Global Power

2. India's Relations with the USA and USSR/Russia

3. India's Engagements with China

Module II

- 4. India in South Asia: Debating Regional Strategies
- 5. India's Negotiating Style and Strategies: Trade, Environment and Security Regimes
- 6. India in the Contemporary Multipolar World

Readings:

I. India's Foreign Policy: From a Postcolonial State to an Aspiring Global Power

S. Ganguly and M. Pardesi, (2009) 'Explaining Sixty Years of India's Foreign Policy', in India Review, Vol. 8 (1), pp. 4–19.

Ch. Ogden, (2011) 'International 'Aspirations' of a Rising Power', in David Scott (ed.), Handbook of India's International Relations, London: Routeledge, pp.3-31

W. Anderson, (2011) 'Domestic Roots of Indian Foreign Policy', in W. Anderson, Trysts with Democracy: Political Practice in South Asia, Anthem Press: University Publishing Online.

J. Bandhopadhyaya, (1970) The Making of India's Foreign Policy, New Delhi: Allied Publishers.

II: India's Relations with the USA and USSR/Russia

S. Mehrotra, (1990) 'Indo-Soviet Economic Relations: Geopolitical and Ideological Factors', in India and the Soviet Union: Trade and Technology Transfer, Cambridge University Press: Cambridge, pp. 8-28. R. Hathaway, (2003) 'The US-India Courtship: From Clinton to Bush', in S. Ganguly (ed.), India as an Emerging Power, Frank Cass: Portland.

A. Singh, (1995) 'India's Relations with Russia and Central Asia', in International Affairs, Vol. 71 (1): 69-81.
M. Zafar, (1984), 'Chapter 1', in India and the Superpowers: India's Political Relations with the Superpowers in the 1970s, Dhaka, University Press.

H. Pant, (2008) 'The U.S.-India Entente: From Estrangement to Engagement', in H. Pant, Contemporary Debates in Indian Foreign and Security Policy: India Negotiates Its Rise in the International System, Palgrave Macmillan: London.

D. Mistry, (2006) 'Diplomacy, Domestic Politics, and the U.S.-India Nuclear Agreement', in Asian Survey, Vol. 46 (5), pp. 675-698.

III: India's Engagements with China

H. Pant, (2011) 'India's Relations with China', in D. Scott (ed.), Handbook of India's International Relations, London: Routeledge, pp. 233-242.

A. Tellis and S. Mirski, (2013) 'Introduction', in A. Tellis and S. Mirski (eds.), Crux of Asia: China, India, and the Emerging Global Order, Carnegie Endowment for International Peace: Washington.

S. Raghavan, (2013) 'Stability in Southern Asia: India's Perspective', in A. Tellis and S. Mirski (eds.), Crux of Asia: China, India, and the Emerging Global Order, Carnegie Endowment for International Peace: Washington.

Li Li, (2013) 'Stability in Southern Asia: China's Perspective', in A. Tellis and S. Mirski (eds.), Crux of Asia: China, India, and the Emerging Global Order, Carnegie Endowment for International Peace: Washington. IV: India in South Asia: Debating Regional Strategies

S. Muni, (2003) 'Problem Areas in India's Neighbourhood Policy', in South Asian Survey, Vol. 10 (2), pp. 185-196.

S. Cohen, (2002) India: Emerging Power, Brookings Institution Press.V. Sood, (2009) 'India and regional security interests', in Alyssa Ayres and C. Raja Mohan (eds), Power realignments in Asia: China, India, and the United States, New Delhi: Sage.

M. Pardesi, (2005) 'Deducing India's Grand Strategy of Regional Hegemony from Historical and Conceptual Perspectives', IDSS Working Paper, 76,

D. Scott, (2009) 'India's "Extended Neighbourhood" Concept: Power Projection for a Rising Power', in India Review, Vol. 8(2), pp. 107-143 112

V: India's Negotiating Style and Strategies: Trade, Environment and Security Regimes

S. Cohen, (2002) 'The World View of India's Strategic Elite', in S. Cohen, India: Emerging Power, Brookings Institution Press, pp. 36-65.

A. Narlikar, (2007) 'All that Glitters is not Gold: India's Rise to Power', in Third World Quarterly, Vol. 28 (5) pp. 983 – 996.

N. Dubash, (2012) 'The Politics of Climate Change in India: Narratives of Enquiry and Cobenefits', Working Paper, New Delhi: Centre for Policy Research. N. Jayaprakash, (2000) 'Nuclear Disarmament and India', in Economic and Political Weekly, Vol. 35 (7), pp. 525-533.

P. Bidwai, (2005) 'A Deplorable Nuclear Bargain', in Economic and Political Weekly, Vol. 40 (31), pp. 3362-3364.

A. Anant, (2011) 'India and International Terrorism', in D. Scott (ed.), Handbook of India's International Relations, London: Routledge, pp. 266-277.

VI: India in the Contemporary Multipolar World

R. Rajgopalan and V. Sahni (2008), 'India and the Great Powers: Strategic Imperatives, Normative Necessities', in South Asian Survey, Vol. 15 (1), pp. 5–32.

C. Mohan, (2013) 'Changing Global Order: India's Perspective', in A. Tellis and S. Mirski (eds.), Crux of Asia: China, India, and the Emerging Global Order, Carnegie Endowment for International Peace: Washington. A. Narlikar, (2006) 'Peculiar Chauvinism or Strategic Calculation? Explaining the Negotiating Strategy of a Rising India', in International Affairs, Vol. 82 (1), pp. 59-76.

P. Mehta, (2009) 'Still Under Nehru's Shadow? The Absence of Foreign Policy Frameworks in India', in India Review, Vol. 8(3), pp. 209–233.

Development Process and Social Movements in Contemporary India

Code: PLS-A-DSE-5-B(2)-TH+TU

Module I

I. Development Process since Independence

a. State and planning

- b. Liberalization and reforms
- II. Industrial Development Strategy and its Impact on the Social Structure

a. Mixed economy, privatization, the impact on organized and unorganized labour

b. Emergence of the new middle class

III. Agrarian Development Strategy and its Impact on the Social Structure

a. Land Reforms, Green Revolution

b. Agrarian crisis since the 1990s and its impact on farmers

Module II

IV. Social Movements
Social movements and New Social movements
Approaches to the study of social movements: Marxist theory, Gandhian theory, Resource
Mobilisation theory, Relative Deprivation theory
V. Globalisation and Social Movements in India (18classes)
Environmental movements
Tribal movements
Women's movements
Civil rights movements

Readings:

I. The Development Process since Independence

A. Mozoomdar, (1994) 'The Rise and Decline of Development Planning in India', in T. Byres(ed.) *The State and Development Planning in India*. Delhi: Oxford University Press, pp. 73-108.

A. Varshney, (2010) 'Mass Politics or Elite Politics? Understanding the Politics of India's Economic Reforms' in R. Mukherji (ed.) *India's Economic Transition: The Politics of Reforms*, Delhi: Oxford University Press, pp 146-169.

P. Chatterjee, (2000) 'Development Planning and the Indian State', in Zoya Hasan (ed.), *Politics and the State in India*, New Delhi: Sage, pp.116-140.

P. Patnaik and C. Chandrasekhar, (2007) 'India: Dirigisme, Structural Adjustment, and the Radical Alternative', in B. Nayar (ed.), *Globalization and Politics in India*. Delhi: OxfordUniversity Press, pp. 218-240.
P. Bardhan, (2005) 'Epilogue on the Political Economy of Reform in India', in *The PoliticalEconomy of Development in India*. 6th impression, Delhi: Oxford University Press.

T. Singh, (1979) 'The Planning Process and Public Process: a Reassessment', *R. R. KaleMemorial Lecture*, Pune: Gokhale Institute of Politics and Economics.

II. Industrial development strategy and its impact on social structure

Readings:

A. Aggarwal, (2006) 'Special Economic Zones: Revisiting the Policy Debate', in *Economic and Political Weekly*, XLI (43-44), pp.4533-36.

B. Nayar (1989) *India's Mixed Economy: The Role of Ideology and its Development*, Bombay:Popular Prakashan.

F. Frankel, (2005) 'Crisis of National Economic Planning', in India's Political Economy (1947-

2004): The Gradual Revolution, Delhi: Oxford University Press, pp. 93-340.

L. Fernandes, (2007) *India's New Middle Class: Democratic Politics in an Era of EconomicReform*, Delhi: Oxford University Press.

S. Shyam, (2003) 'Organizing the Unorganized', in *Seminar*, [Footloose Labour: A Symposiumon Livelihood Struggles of the Informal Workforce, 531] pp. 47-53.

S. Chowdhury, (2007) 'Globalization and Labour', in B. Nayar (ed.) *Globalization and Politicsin India*, Delhi: Oxford University Press, pp.516-526.
V. Chibber, (2005) 'From Class Compromise to Class Accommodation: Labor's Incorporationinto the Indian Political Economy' in R. Ray, and M.F. Katzenstein (eds.) *SocialMovements inIndia*, Delhi: Oxford University Press, pp 32-60.

III. Agrarian development strategy and its impact on social structure

Readings:

A. Desai, (ed.), (1986) *Agrarian Struggles in India after Independence*, Delhi: OxfordUniversity Press, pp. xi-xxxvi.

F. Frankel, (1971) *India's Green Revolution: Economic Gains and Political Costs*, Princetonand New Jersey: Princeton University Press.

F. Frankel, (2009) Harvesting Despair: Agrarian Crisis in India, Delhi: Perspectives, pp. 161-169.

J. Harriss, (2006) 'Local Power and the Agrarian Political Economy' in Harriss, J. (ed) Power

Matters: Essays on Institutions, Politics, and Society in India, Delhi. Oxford University Press, pp. 29-32.

K. Suri, (2006) 'Political economy of Agrarian Distress', in *Economic and Political Weekly*, XLI(16) pp. 1523-1529.

P. Joshi, (1979) Land Reforms in India: Trends and Perspectives, New Delhi: Allied publishers.

P. Appu, (1974) 'Agrarian Structure and Rural Development', in *Economic and PoliticalWeekly*, IX (39), pp.70 – 75.

P. Sainath, (2010) 'Agrarian Crisis and Farmers', Suicide', *Occasional Publication* 22, NewDelhi: India International Centre (IIC).

M. Sidhu, (2010) 'Globalisation vis-à-vis Agrarian Crisis in India', in R. Deshpande and S.Arora, (eds.) Agrarian Crises and Farmer Suicides (Land Reforms in India Series), New Delhi:Sage, pp. 149-174. V. Sridhar, (2006) 'Why Do Farmers Commit Suicide? The Case Study of Andhra Pradesh', in *Economic and Political Weekly*, XLI (16).

IV. Social Movements

G. Shah, (ed.), (2002) Social Movements and the State. New Delhi: Sage Publications.

R. Singh (2001), Social Movements, Old and New: A Post-Modernist Critique, New Delhi: Sage

P. Wignaraja (ed.), (1993), New Social Movements in the South: Empowering the People, New Delhi: Vistar

V. Globalisation and Social Movements in India

Readings:

G. Haragopal, and K. Balagopal, (1998) 'Civil Liberties Movement and the State in India', in M. Mohanty, P. Mukherji and O. Tornquist, (eds.) *People's Rights: Social Movements and the State in the Third World* New Delhi: Sage, pp. 353-371.

M. Mohanty, (2002) 'The Changing Definition of Rights in India', in S. Patel, J. Bagchi, and K. Raj (eds.) *Thinking Social Sciences in India: Essays in Honour of Alice Thorner* Patel, NewDelhi: Sage. G. Omvedt, (2012) 'The Anti-caste Movement and the Discourse of Power', in N. Jayal (ed.)

Democracy in India, New Delhi: Oxford India Paperbacks, sixth impression, pp.481-508.

P. Ramana, (2011) 'India's Maoist Insurgency: Evolution, Current Trends and Responses', in

M. Kugelman (ed.) *India's Contemporary Security Challenges*, Woodrow Wilson International Centre for Scholars Asia Programme, Washington D.C., pp.29-47.

A. Ray, (1996) 'Civil Rights Movement and Social Struggle in India', in *Economic and Political Weekly*, XXI (28). pp. 1202-1205.

A. Roy, (2010) 'The Women's Movement', in N. Jayal and P. Mehta (eds.) *The Oxford Companion to Politics in India*, New Delhi: Oxford University Press, pp.409-422.

N. Sundar, (2011) 'At War with Oneself: Constructing Naxalism as India's Biggest SecurityThreat', in M. Kugelman (ed.) *India's Contemporary Security Challenges*, Woodrow WilsonInternational Centre for Scholars Asia Programme, Washington D.C., pp.46-68.

M. Weiner, (2001) 'The Struggle for Equality: Caste in Indian Politics', in A.Kohli. (ed.) *TheSuccess of India's Democracy*, Cambridge: CUP, pp.193-225.

S. Sinha, (2002) 'Tribal Solidarity Movements in India: A Review', in G. Shah. (ed.) *SocialMovements and the State*, New Delhi: Sage, pp. 251-266.

Additional Readings:

S. Banerjee, (1986) 'Naxalbari in Desai', in A.R. (ed.) *Agrarian Struggles in India AfterIndependence*. Delhi: Oxford University Press, pp.566-588.

B. Nayar, (ed.), (2007) *Globalization and Politics in India*. Delhi: Oxford University Press.S. Roy and K. Debal, (2004) *Peasant Movements in Post-Colonial India: Dynamics of Mobilization and Identity*, Delhi: Sage.
G. Omvedt, (1983) *Reinventing Revolution, New Social Movements and the SocialistTradition in India*, New York: Sharpe.

G. Shah, (ed.), (2002) Social Movements and the State. New Delhi: Sage Publications.

G. Shah, (2004) Social Movements in India: A Review of Literature, New Delhi: SagePublications.

G. Rath, (ed.), (2006) *Tribal development in India: The Contemporary Debate*, New Delhi:Sage Publications. J. Harris, (2009) *Power Matters: Essays on Institutions, Politics, and Society in India*. Delhi:Oxford University press.

. K. Suresh, (ed.), (1982) *Tribal Movements in India*, Vol I and II, New Delhi: Manohar(emphasis on the introductory chapter).

M. Mohanty, P. Mukherji and O.Tornquist, (1998) *People's Rights: Social Movements and the State in the Third World*. New Delhi: Sage Publications.

M. Rao, (ed.), (1978) Social Movements in India, Vol. 2, Delhi: Manohar.

N. Jayal, and P. Mehta, (eds.), (2010) *The Oxford Companion to Politics in India*, Delhi:OxfordUniversity Press.

P. Bardhan, (2005) *The Political Economy of Development in India*, 6th impression, Delhi:Oxford University Press.

R. Mukherji, (ed.), (2007) India's Economic Transition: The Politics of Reforms, Delhi: OxfordUniversity Press.

R, Ray and M. Katzenstein, (eds.), (2005) Social Movements in India, Delhi: Oxford UniversityPress.

S. Chakravarty, (1987) Development Planning: The Indian Experience, Delhi: OxfordUniversity Press.

Public Policy in India

Code: PLS-A-DSE-6-A(3)-TH+TU

Module I

1.Introduction to Policy Analysis

2. The Analysis of Policy vis-à-vis the Theories of State

Module II

3. Political Economy and Policy: Interest Groups and Social Movements.

4. Ideology and Policy: Nehruvian Vision, Economic Liberalisation and recent developments

Readings:

I Introduction to Policy Analysis

Jenkins, B. (1997) 'Policy Analysis: Models and Approaches' in Hill, M. (1997) *The PolicyProcess: A Reader* (2nd Edition). London: Prentice Hall, pp. 30-40.

Dye, T.R. (2002) *Understanding Public Policy*. Tenth Edition. Delhi: Pearson, pp.1-9, 32-56 and 312-329. Sapru, R.K. (1996) *Public Policy : Formulation, Implementation and Evaluation*. New Delhi: Sterling Publishers, pp. 26-46.

Wildavsky, A.(2004), 'Rescuing Policy Analysis from PPBS' in Shafritz, J.M. & Hyde, A.C. (eds.) *Classics of Public Administration*. 5th Edition. Belmont: Wadsworth, pp.271-284.

II. The Analysis of Policy in the Context of Theories of State Dunleavy, P. and O'Leary, B. (1987) *Theories of the State*. London: Routledge. McClennan, G. (1997) 'The Evolution of Pluralist Theory' in Hill, M. (ed.) *The Policy Process: A Reader.* 2nd Edition. London: Prentice Hall, pp. 53-61.

Simmie, J. & King, R. (eds.) (1990) *The State in Action: Public Policy and Politics*. London: Printer Publication, pp.3-21 and 171-184.

Skocpol, T. et al (eds.) (1985) *Bringing the State Back In.* Cambridge: Cambridge University Press, pp. 3-43 and 343-366.

Dye, T.R. (2002) Understanding Public Policy. 10th Edition. Delhi: Pearson, pp.11-31.

III. Political Economy and Policy: Interest Groups and Social Movements.

Lukes, S. (1986) Power. Basil: Oxford, pp. 28-36.

Lukes, S. (1997) 'Three Distinctive Views of Power Compared', in Hill, M. (ed.), *The Policy Process: A Reader*. 2nd Edition. London: Prentice Hall, pp. 45-52.

Giddens, A. (1998) *The Third Way: The Renewal of Social Democracy.* Cambridge: Polity Press, pp. 27-64 and 99-118.

IV. Ideology and Policy: Nehruvian Vision, Economic Liberalisation and recent developments Basu Rumki (2015) Public Administration in India Handates, Performance and Future Perspectives, New Delhi, Sterling Publishers

Self, P. (1993) *Government by the Market? The Politics of Public Choice*. Basingstoke: MacMillan, pp. 1-20,70-105,113-146,198-231 and 262-277.

Girden, E.J. (1987) 'Economic Liberalisation in India: The New Electronics Policy' in *AsianSurvey*. California University Press. Volume 27, No.11. Available at -<u>www.jstor.org/stable/2644722</u>.

Understanding Global Politics

Code: PLS-A-DSE-6-A(4)-TH+TU

Module I

I. What Makes the World What it is a. The Sovereign State System

i Evolution of the state system ii The concept of Sovereignty

b. The Global Economy
i Discussing the Bretton Woods Institutions and WTO
ii Ideological underpinnings
iii Transnational Economic Actors

c. Identity and Culture

ii. What Drives the World Aparta.Global Inequalitiesb.Violence: Conflict, War and Terrorism

III. Why We Need to Bring the World Together

a.Global Environment b. Global Civil Society

Readings:

I. What Makes the World What it is? a. The Sovereign State System

S. Elden, (2009) 'Why Is The World Divided Territorially?', in J. Edkins and M. Zehfuss (eds.)

Global Politics: A New Introduction, New York: Routledge, pp. 192-219.

M. Shapiro, (2009) 'How Does The Nation-State Work?', in J. Edkins and M. Zehfuss (eds.)

Global Politics: A New Introduction, New York: Routledge, pp. 220-243.

R. Mansbach and K.Taylor, (2012) 'The Evolution of the Interstate System and Alternative Global Political Systems', *Introduction to Global Politics*, 2nd edition, New York: Routledge, pp. 34-68.

D. Armstrong, (2008) 'The Evolution of International Society', in J. Baylis, S. Smith, and P. Owens (ed.) *The Globalization of World Politics: An Introduction to International Relations,*

New York: Oxford University Press, pp. 36-52.

N. Inayatullah and D. Blaney, (2012) 'Sovereignty' in B. Chimni and S. Mallavarapu (ed.) International Relations: Perspectives For the Global South, New Delhi: Pearson, pp. 124-134.

b. The Global Economy

Readings:

V. Peterson, (2009) 'How Is The World Organized Economically?', in J. Edkins and M. Zehfuss (eds.) *Global Politics: A New Introduction*, New York: Routledge, pp. 271-293.

Bourke, (2009) 'Why Does Politics Turn Into Violence?', in J. Edkins And M. Zehfuss (eds.),

Global Politics: A New Introduction, New York: Routledge, pp. 370-396.

Bajpai, (2012) 'Global Terrorism', in B. Chimni and S. Mallavarapu (ed.), *InternationalRelations: Perspectives For the Global South*, New Delhi: Pearson, pp. 312-327.

R. Mansbach, and K. Taylor, (2012) 'The Causes of War and the Changing Nature Of Global Politics', in *Introduction to Global Politics*, 2nd edition, New York: Routledge, pp. 248-283.

R. Collin and P. Martin, 'Kinds Of Conflict: The World When Things Go Wrong', in *AnIntroduction To World Politics: Conflict And Consensus On A Small Planet*, London: Rowman& Littlefield Publishers, pp. 267-425.

III. Why We Need to Bring the World Together? a. Global Environment

Readings:

S. Dalby, (2009) 'What Happens If We Do not Think In Human Terms?', in J. Edkins and M. Zehfuss (eds.), *Global Politics: A New Introduction*, New York: Routledge, pp. 45-69.

R. Collin and P. Martin, (2013) 'The Greening of A Blue Planet', in *An Introduction To WorldPolitics: Conflict And Consensus On A Small Planet*, Maryland: The Rowman & LittlefieldPublication Group, pp. 527-570. A. Heywood, (2011) 'Global Environmental Issues', in *Global Politics,* London: Palgrave, 2011, pp. 383-411. N. Carter, (2007) *The Politics of Environment: Ideas, Activism, Policy*, 2nd edition, Cambridge: Cambridge University Press, pp 13-81.

b. Global Civil Society

Readings:

Zehfuss, (2009) 'What Can We Do To Change The World?', in J. Edkins and M. Zehfuss (eds.), *Global Politics:* A New Introduction, New York: Routledge, pp. 483-501.

N. Chandhoke, (2011) 'The Limits of Global Civil Society,' Available at www.gcsknowledgebase.org/wp-content/uploads/2002chapter2.pdf, Accessed: 19.04.2013.

K. Mingst and J. Snyder (eds.), (2011) 'Transnational Issues', in *Essential Readings In WorldPolitics*, 4th Edition, New York: W. W. Norton And Company, pp. 574-626.

M. Keck and K. Sikkink, (2007) 'Transnational Activist Networks,' in Robert J. Art and R. Jervis (eds.) International Politics: Enduring Concepts and Contemporary Issues, 8th Edition, London: Pearson, pp. 532-538.

M. Naim, (2007) 'The Five Wars Of Globalization', in R. Art and R. Jervis (eds.) *InternationalPolitics: Enduring Concepts And Contemporary Issues,* 8th Edition, London: Pearson, pp. 558-566.

S. Mallaby, (2007) 'NGOs: Fighting Poverty, Hurting the Poor', in R. Art and R. Jervis (eds.)

International Politics: Enduring Concepts and Contemporary Issues, 8th edition, New York: Pearson, pp. 539-545.

G. Lexter and S. Halperin (eds.), (2003) Global Civil Society and Its Limits, New York: Palgrave, pp. 1-21.

Citizenship in a Globalising World

Code: PLS-A-DSE-6-B(3)-TH+TU

This course will explore theories of citizenship, the historical development of the concept and its practice of in an increasingly globalizing world.

Module I

- 1. Classical conceptions of citizenship
- 2. The Evolution of Citizenship and the Modern State

Module II

- 3. Citizenship and Diversity
- 4. Citizenship beyond the Nation-state: Globalization and global justice
- 5. The idea of cosmopolitan citizenship

Essential Readings

- Acharya, Ashok. (2012) Citizenship in a Globalising World. New Delhi: Pearson.
- Beiner, R. (1995) *Theorising Citizenship*. Albany: State University of New York Press.
- Held, David (1995), *Democracy and the Global Order: From the Modern State toCosmopolitan Governance* (Stanford: Stanford University Press).
- Kymlicka, Will (1999), "Citizenship in an Era of Globalization: A Response to Held," in Ian Shapiro and Casiano Hacker-Cordon (eds.), *Democracy's Edges* (Cambridge, UK: Cambridge University Press).
- Oliver, D. and D. Heater (1994). *The Foundations of Citizenship*. London, Harvester Wheatsheaf.
- Scholte, Jan Aart (2000), *Globalization: A Critical Introduction* (New York: St. Martin's).
- Zolo, Danilo (1997), Cosmopolis: Prospects for World Government (Cambridge, UK: Polity Press).

Human Rights in a Comparative Perspective

Code: PLS-A-DSE-6-B(4)-TH+TU

Module I

Human Rights: Theory and Institutionalization

Understanding Human Rights: Three Generations of Rights Institutionalization: Universal Declaration of Human Rights Rights in National Constitutions: South Africa and India

Issues:

Torture: USA and India; Surveillance and Censorship: China and India; Terrorism and Insecurity of Minorities: USA and India

Module II Structural Violence: Caste and Race: South Africa and India

Gender and Violence: India and Pakistan

Adivasis/Aboriginals and the Land Question: Australia and India

READING LIST

Human Rights: Theory and Institutionalization

Essential Readings:

I. Hoffman and P. Graham, (2006) 'Human Rights', Introduction to Political Theory, Delhi, Pearson, pp. 436-458.

SAHRDC (2006) 'Introduction to Human Rights'; 'Classification of Human Rights: An Overview of the First, Second, and Third Generational Rights', in *Introducing Human Rights*, New Delhi: Oxford University Press.

The Constitution of the Republic of South Africa, Chapter 2: Bill of Rights.

The Constitution of India, Chapter 3: Fundamental Rights

Issues

Torture: USA and India

Essential Readings:

M. Lippman, (1979) 'The Protection of Universal Human Rights: The Problem of Torture' *Universal Human Rights*, Vol. 1(4), pp. 25-55

J. Lokaneeta, (2011) 'Torture in the TV Show 24: Circulation of Meanings'; 'Jurisprudence on Torture and Interrogations in India', in *Transnational Torture Law, Violence, and State Powerin the United States and India*, Delhi: Orient Blackswan,

D. O'Byrne, (2007) 'Torture', in *Human Rights: An Introduction*, Delhi: Pearson, pp. 164-197.

Surveillance and Censorship: China and India

Essential Readings:

D. O'Byrne, (2007) 'Censorship', in *Human Rights: An Introduction*, Delhi: Pearson, pp. 106-138.
D. Lyon, (2008) Surveillance Society, Talk for Festival del Diritto, Piacenza, Italia, September 28, pp.1-7.

Fu Hualing, (2012) 'Politicized Challenges, Depoliticized Responses: Political Monitoring in China's Transitions', paper presented at a conference on States of Surveillance: Counter-Terrorism and Comparative Constitutionalism, at the University of New South Wales, Sydney, 13-14 December.
U. Singh, (2012) 'Surveillance Regimes in India', paper presented at a conference on States of Surveillance: Counter-Terrorism and Comparative Constitutionalism, at the University of New South Wales, Sydney, 13-14 December.

Terrorism and Insecurity of Minorities: USA and India

Essential Readings:

E. Scarry, (2010) 'Resolving to Resist', in *Rule of Law, Misrule of Men*, Cambridge: Boston Review Books, MIT, pp.1-53.

M. Ahmad, (2002) 'Homeland Insecurities: Racial Violence the Day after September 11', *Social Text*, 72, Vol. 20(3), pp. 101-116.

U. Singh, (2007) 'The Unfolding of Extraordinariness: POTA and the Construction of Suspect Communities', in *The State, Democracy and Anti-terror Laws in India*, Delhi: Sage Publications, pp.165-219

Structural Conflicts

Caste and Race: South Africa and India

Essential Readings:

A. Pinto, (2001) 'UN Conference against Racism: Is Caste Race?', in *Economic and PoliticalWeekly*, Vol. 36(30)

D. O'Byrne, (2007) 'Apartheid', in Human Rights: An Introduction, Delhi: Pearson, pp. 241-262.

R. Wasserstorm, (2006), 'Racism, Sexism, and Preferential Treatment: An approach to the Topics', in R.

Goodin and P. Pettit, *Contemporary Political Philosophy: an Anthology*, Oxford: Blackwell, pp-549-574 R. Wolfrum, (1998) 'Discrimination, Xenophobia and Racism' in J. Symonides, *Human Rights:New Dimensions and Challenges*, Aldershot, Ashgate/UNESCO, pp.181-198.

Gender and Violence: India and Pakistan

Essential Readings:

A. Khan and R. Hussain, (2008), 'Violence Against Women in Pakistan: Perceptions and Experiences of Domestic Violence', *Asian Studies Review*, Vol. 32, pp. 239 – 253

K. Kannabiran (2012) 'Rethinking the Constitutional Category of Sex', in *Tools of Justice:Non-Discrimination and the Indian Constitution*, New Delhi, Routledge, pp.425-443

Adivasis/Aboriginals and the Land Question: Australia and India

Essential Readings:

H. Goodall, (2011) 'International Indigenous Community Study: Adivasi Indigenous People in India', in A. Cadzow and J. Maynard (eds.), *Aboriginal Studies*, Melbourne: Nelson Cengage Learning, pp.254-259.

K. Kannabiran, (2012) 'Adivasi Homelands and the Question of Liberty', in *Tools of Justice:Non-Discrimination and the Indian Constitution*, New Delhi: Routledge, pp.242-271.

N. Watson (2011) 'Aboriginal and Torres Strait Islander Identities' in A. Cadzow and J. Maynard (eds.), *Aboriginal Studies*, Melbourne: Nelson Cengage Learning, pp.43-52.

W. Fernandes (2008) 'India's Forced Displacement Policy and Practice. Is Compensation up to its Functions?', in M. Cernea and H. Mathus (eds), *Can Compensation PreventImpoverishment? Reforming Resettlement through Investments and Benefit-Sharing*,pp.181-207, New Delhi: Oxford University Press.

Additional Readings:

A. Laws and V. Iacopino, (2002) 'Police Torture in Punjab, India: An Extended Survey', in *Health and Human Rights*, Vol. 6(1), pp. 195-210

D. O'Byrne, (2007) 'Theorizing Human Rights', in *Human Rights: An Introduction*, Delhi, Pearson, pp.26-70.

J. Morsink, (1999) *The Universal Declaration of Human Rights: Origins, Drafting and Intent*, Philadelphia: University of Pensylvania Press, pp. ix-xiv

J. Nickel, (1987) Making Sense of Human Rights: Philosophical Reflections on the

UniversalDeclaration of Human Rights, Berkeley: University of California Press.

J. Goldman, (2005) 'Of Treaties and Torture: How the Supreme Court Can Restrain the Executive', in *Duke Law Journal*, Vol. 55(3), pp. 609-640.

J. Tsutsui and C. Wotipka, (2004) Global Civil Society and the International Human Rights Movement: Citizen Participation in Human Rights International Nongovernmental Organizations, in *Social Forces*, Vol. 83(2), pp. 587-620.

J. Rabben, (2001) Amnesty International: Myth and Reality, in *Agni*, No. 54, Amnesty International Fortieth Anniversary pp. 8-28

K. Mohanty, (2010) 'In Pursuit of People's Rights: An Introduction', in M. Mohanty et al.,

Weapon of the Oppressed: Inventory of People's Rights in India, New Delhi: Danish Books, pp.1-11 M. Cranston, (1973) What are Human Rights? New York: Taplinger

M. Ishay, (2004) *The History of Human Rights: From Ancient Times to the Globalization Era*, Delhi: Orient Blackswan.

R. Sharan, (2009) 'Alienation and Restoration of Tribal Land in Jharkhand in N Sundar (ed.) *Legal Grounds*, New Delhi: Oxford University Press, pp. 82-112

Text of UDHR available at http://www.un.org/en/documents/udhr/index.shtml

U. Baxi, (1989) 'From Human Rights to the Right to be Human: Some Heresies', in S. Kothari and H. Sethi (eds.), *Rethinking Human Rights*, Delhi: Lokayan, pp.181-166.

Skill Enhancement Courses

Democratic Awareness through Legal Literacy

Code: PLS-A-SEC-3-A(1)-TH

Module I

1. Laws relating to Criminal jurisdiction-provisions relating to filing an FIR, arrest, bail, search and seizure and some understanding of the questions of evidence and procedure in the Criminal Procedure Code.

- 2. Offences under IPC.
- 3. India: Personal laws. Customary Laws
- 4. Laws relating to Dowry, sexual harassment and violence against women.

Module II

- 5. Laws relating to consumer rights.
- 6. Right to Information.
- 7. Laws relating to Cybercrimes.
- 8. Anti-terrorist laws: Implications for security and human rights.

Readings:

Pandey, (2008) 'Laws Relating to Criminal Justice: Challenges and Prospects', in K. Sankaran and U. Singh, *Towards Legal Literacy,* New Delhi: Oxford University Press, pp.61-77.SAHRDC, (2006)'Reporting a Crime: First Information Report', in *Oxford Handbook of Human Rights and Criminal Justice in India - The system and Procedure,* New Delhi:Oxford University Press, pp.16-26.

SAHRDC, (2006) 'Bail', in Oxford Handbook of Human Rights and Criminal Justice in India-The system and Procedure, New Delhi: Oxford University Press, pp.59-71.

SAHRDC, (2006) 'Detention', in Oxford Handbook of Human Rights and Criminal Justice in India - The system and Procedure. New Delhi: Oxford University Press, pp.72-84.

P. Mathew, (2003) Your Rights if you are Arrested, New Delhi. Indian Social Institute.

P. Mathew, (2002) *The Law on Atrocities Against Scheduled Castes and Scheduled Tribes,* New Delhi: Indian Social Institute.

K. Saxena, (2011) 'Dalits', in M. Mohanty et al., *Weapon of the Oppressed, Inventory of People's Rights in India*. Delhi: Danish Books, Pp.15-38

K. Saxena, (2011) 'Adivasis', in M. Mohanty et al., *Weapon of the Oppressed, Inventory of People's Rights in India*, Delhi: Danish Books, Pp.39-65.

S. Durrany, (2006) *The Protection of Women From Domestic Violence Act 2005*, New Delhi: Indian Social Institute. V. Kumari, (2008) 'Offences against Women', in K, Sankaran and U. Singh (eds.) *Towards Legal Literacy*, New Delhi: Oxford University Press.

P. D. Mathew (2004) *The Measure to Prevent Sexual Harassment of Women in Work Place.* New Delhi: Indian Social Institute.

D. Srivastva, (2007) 'Sexual Harassment and Violence against Women in India: Constitutional and Legal Perspectives', in C. Kumar and K. Chockalingam (eds) *HumanRights, Justice, and Constitutional Empowerment*, Delhi: Oxford University Press.

S. Naib, (2013) 'Right to Information Act 2005', in *The Right to Information in India*, New Delhi: Oxford University Press, Available at

http://www.humanrightsinitiative.org/publications/rti/guide_to_use_rti_act_2005_Eng lish2012_light_Aspire.pdf.

Bare Acts: Consumer Protection Act, 1986, Available at http://chdslsa.gov.in/right menu/act/pdf/consumer.pdf. Criminal law Amendment Act, 2013, Available at http://egazette.nic.in/WriteReadData/2013/E_17_2013_212.pdf, Accessed: 10.04.2013. Protection of Women Against Domestic Violence Act, 2005, Available at http://wcd.nic.in/wdvact.pdf. Right to Information Act, 2005, Available at http://righttoinformation.gov.in/rti-act.pdf. Scheduled Castes and Scheduled Tribes Prevention of Atrocities Act, 1989, Available at http://tribal.nic.in/writereaddata/linkimages/poaact989E4227472861.pdf. Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, Available at http://tribal.gov.in/writereaddata/mainlinkFile/File1033.pdf. The Persons with Disabilities (Equal Opportunities, Protection of Rights, Full Participation) Act, 1995, Available at http://bhind.nic.in/Sparsh disability%20act%201995.pdf. The Right of Children to Free and Compulsory Education Act, 2009, Available at http://www.delta.org.in/form/rte.pdf. The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Bill, 2012, Available at http://164.100.24.219/BillsTexts/LSBillTexts/PassedLoksabha/144C 2010 LS Eng.pdf. Criminal Law Amendment Act, 2013, Available at mha.nic.in/pdfs/TheCrimnalLaw030413.pdfFile Format: PDF/AdobeAcrobat – Quick View.

Understanding the Legal System

Code: PLS-A-SEC-3-A(2)-TH

Module I

- 1) Outline of the legal system in India
- 2) System of Courts/tribunals and their jurisdiction in India-Criminal and civil courts, writ jurisdiction.
- 3) Specialized Courts such as juvenile courts, mahila courts and tribunals.

Module II

- 4) Role of the police and executive in criminal law administration.
- 5) Alternate dispute mechanisms such as Lok Adalats, non-formal mechanisms.

Readings:

Creating Legal Awareness, edited by Kamala Sankaran and Ujjwal Singh (Delhi: OUP, 2007)

S..K. Agarwala, *Public Interest Litigation in India*, K.M. Munshi Memorial Lecture, Second Series, Indian Law Institute, Delhi, 1985.

Asha Bajpai, Child Rights in India: Law, Policy, and Practice, Oxford University Press, New Delhi, 2003

B.L. Wadhera, Public Interest Litigation - A Handbook, Universal, Delhi, 2003.

P.C. Rao and William Sheffiled Alternate Dispute Resolution: What it is and How it Works, Universal Law Books and Publishers, Delhi, 2002

V.N. Shukla's *Constitution of India* by Mahendra P. Singh, Eastern Book Co. 10th edition.

Parmanand Singh, 'Access to Justice and the Indian Supreme Court', 10 & 11 Delhi Law Review 156, 1981-82. J. Kothari, (2005) 'Criminal Law on Domestic Violence', Economic and Political Weekly, Vol. 40(46), pp. 4843-4849. H. Mander, and A. Joshi, *The Movement for Right to Information in India, People's Power for the Control of Corruption*. Available at http://www.rtigateway.org.in/Documents/References/English/Reports/12.%20An%20article%20on%20RTI%20by%20Ha rsh%20Mander.pdf. P. Mathew, and P. Bakshi, (2005) 'Indian Legal System', New Delhi: Indian Social Institute. P. Mathew, and P. Bakshi, (2005) 'Women and the Constitution', New Delhi: Indian Social Institute. N. Menon, (2012) 'Sexual Violence', in Seeing Like a Feminist New Delhi: Zubaan and Penguin, pp. 113-146. M, Mohanty et al. (2011) Weapon of the Oppressed, Inventory of People's Rights in India . Delhi: Danish Books. Centre for Good Governance, (2008) Right to Information Act, 2005: A Citizen's Guide, Available at http://www.rtigateway.org.in/Documents/Publications/A%20CITIZEN'S%20GUIDE.pdf, Pandey, (2004) Rights of the Consumer. New Delhi: Indian Social Institute. Pandey, (2008) 'Laws Relating to Criminal Justice: Challenges and Prospects', in K. Sankaran and U. Singh, Towards Legal Literacy, New Delhi: Oxford University Press, pp.61-77. SAHRDC, (2006)'Reporting a Crime: First Information Report', in Oxford Handbook of Human Rights and Criminal Justice in India - The system and Procedure, New Delhi: Oxford University Press, pp.16-26. SAHRDC, (2006) 'Bail', in Oxford Handbook of Human Rights and Criminal Justice in India-The system and Procedure, New Delhi: Oxford University Press, pp.59-71. SAHRDC, (2006) 'Detention', in Oxford Handbook of Human Rights and Criminal Justice in India- The system and Procedure. New Delhi: Oxford University Press, Pp.72-84. P. Mathew, (2003) Your Rights if you are Arrested, New Delhi. Indian Social Institute

Legislative Practices and Procedures

Code: PLS-A-SEC-4-B(1)-TH

Module I

- 1) Members of Parliament: Powers and Privileges-Constituency Work.
- 2) State legislative Assemblies: Powers and functions.
- 3) Functionaries of rural and urban local self-government from Zila Parishad, Municipal Corporation to Panchayat/ Ward.

Module II

- 4) How a bill becomes a law, role of standing committees in reviewing a bill, legislative consultants, the framing of rules and regulations.
- 5) Types of committees.
- 6) Role of committees in reviewing government finances, policy, programmes and legislation.
- 7) Powers and functions of people's representative at different tiers of governance

Readings:

M. Madhavan, and N. Wahi, (2008) Financing of Election Campaigns PRS, Centre for Policy Research, New Delhi, Available at: http://www.prsindia.org/uploads/media/conference/Campaign_finance_brief.pdf, Accessed: 19.04.2013 S.

Vanka, (2008) Primer on MPLADS, Centre for Policy Research, New Delhi, Available at http://www.prsindia.org/parliamenttrack/primers/mplads-487/, Accessed: 19.04.2013 129 H. Kalra, (2011) Public Engagement with the Legislative Process PRS, Centre for Policy Research, New Delhi, Available at: http://www.prsindia.org/administrator/uploads/media/Conference%202011/Public%20Eng agement%20with%20the%20Legislative%20Process.pdf, Accessed: 19.04.2013. Government of India (Lok Sabha Secretariat), (2009) Parliamentary Procedures (Abstract Series), Available at http://164.100.47.132/LssNew/abstract/index.aspx, Accessed: 19.04.2013

The legislative process

Readings:

Government of India, (Ministry of Parliamentary Affairs), (2009) Legislation, Parliamentary Procedure, Available at http://mpa.nic.in/Manual/Manual_English/Chapter/chapter-09.htm, Accessed: 19.04.2013 Government of India, (Ministry of Parliamentary Affairs) (2009), Subordinate Legislation, Parliamentary Procedure, Available at: http://mpa.nic.in/Manual/Manual_English/Chapter/chapter-11.htm Accessed: 19.04.2013 D. Kapur and P. Mehta, (2006) 'The Indian Parliament as an Institution of Accountability', Democracy, Governance and Human Rights, Programme Paper Number 23, United Nations Research Institute for Social Development, Available at: http://www.unrisd.org/UNRISD/website/document.nsf/240da49ca467a53f80256b4f005ef2 45/8e6fc72d6b546696c1257123002fcceb/\$FILE/KapMeht.pdf, Accessed: 19.04.2013 O. Agarwal and T. Somanathan, (2005) 'Public Policy Making in India: Issues and Remedies', Available at: http://www.cprindia.org/admin/paper/Public_Policy_Making_in_India_14205_TV_SOMANATHAN.pdf, Accessed: 19.04.2013 B. Debroy, (2001) 'Why we need law reform' Seminar January.

Legislative Committees

Readings:

P. Mehta, 'India's Unlikely Democracy: The Rise of Judicial Sovereignty', Journal of Democracy, Vol. 18(2), pp.70-83. Government link: http://loksabha.nic.in/; http://rajyasabha.nic.in/; http://mpa.nic.in/ K. Sanyal, (2011) Strengthening Parliamentary Committees PRS, Centre for Policy Research, New Delhi, Available at: http://www.prsindia.org/administrator/uploads/media/Conference%202011/Strengthening %20Parliamentary%20Committees.pdf, Accessed: 19.04.2013

Elementary Aspects of Social Research

Code: PLS-A-SEC-4-B(2)-TH

Module I

1. Fundamental issues in Research Methodology: concepts, variables, proposition and hypotheses; hypothesis construction and verification; measurement – scales; ethics in social research.

2. Research design: definition, purpose of research, unit of analysis, fallacy (ecological fallacy and fallacy of reductionism), factors affecting research design.

3. Sources and techniques of data collection -- qualitative and quantitative; Sampling –different types; Basic statistical methods – types of statistics; measures of central tendencies and measures of dispersion; graphic representation of data.

4. Participatory field research: Modes and methods of participant observation; advantages and limitations; Case study: definition; types; steps involved in the method; uses. Focus group method: nature and uses; role of the researcher.

5. Survey method: Definition, types; techniques of survey research: Pilot survey; interviewing – techniques; different types; qualities of a good interviewer; questionnaire – framing a questionnaire; problem of non-response; advantages and disadvantages of survey method.

6. Aggregate data analysis: Sources of aggregate data; uses of aggregate data; advantages of aggregate data; fallacy of inference. Experimental design: key concepts in experimental design; steps and planning the research; issues of equivalence and validity; classical experimental design.

[The Course may be supplemented with the use of computers though it is not obligatory].

Readings:

R. Kumar, Research Methodology: A Step-by-Step Guide for Beginners, Sage, 2010.
W.L. Neuman, Social Research Methods: Qualitative and Quantitative Approaches, Pearson.
D. E. McNabb, (2004) Research Methods for Political Science- Quantitative and Qualitative Methods, New Delhi: Prentice-Hallof India Pvt. Ltd.
R. Chatterjee, (1979) Methods of Political Enquiry, Calcutta: The World Press Pvt. Ltd., 1979.

University of Calcutta

Final Draft BA (General)-CBCS Syllabus in Political Science, 2018

Core Courses* (4 courses provided). Discipline-specific Elective (4 courses provided); Skill Enhancement(4 courses provided).[Students will also have to take courses from other subject/s]

*Core Courses mentioned hereunder are to be treated as the Generic Elective Courses of students pursuing Honours in a subject *other than Political Science*.

- ^Each coursecarries 80 marks--- theoretical and tutorial (plus 10 marks each for Attendance and Internal Assessment).
- 6 credit course: <u>Minimum</u> 30 classes for Theory and 15 contact hours for Tutorial <u>per module</u>. 2 credit course: 30 teaching/lecture hours in total.
- Core, DSE (and GE) Course: 6 credits (5 Theoretical + 1 Tutorial-related).
- Skill Enhancement/Skill-based Courses: 2 credits (no Tutorial).

^End SemesterAssessment--- 65 marks for theoretical segment: 50 marks for subjective/descriptive questions + 15 marks for the category of 1 mark-questions.<u>Question Pattern</u> for subjective/descriptive segment of 50 marks: 2 questions (within 100 words; one from each module) out of 4 (10 x2 = 20) + 2 questions (within 500 words; one from each module) out of 4 (15 x 2 = 30).>>For Skill Enhancement Courses the last component would carry 6 questions--- 15 marks each--- out of which 3 (at least one from each module) to be attempted because such courses have no Tutorial.

15 marks for tutorial-related segments as suggested below (any one item from each mode):

<u>Any one</u> of the following modes: i) <u>Written mode</u>: upto 1000 words for one Term Paper/upto 500 words for each of the two Term Papers/ equivalent Book Review/equivalent Comprehension/equivalent Quotation or Excerpt Elaboration. ii) <u>Presentation Mode</u>: Report Presentation/Poster Presentation/Field work--- based on syllabus-related and/or current topics (May be done in groups)[The modes and themes and/or topics are be decided by the concerned faculty of respective colleges.]

• Core Courses in Semesters I-IV; Discipline-specific courses in Semesters V and VI; Skill Enhancement courses in Semesters III-VI.

IMPORTANT NOTES:

- The Readings provided below (except Bengali books) include those of the UGC Model CBCS Syllabus in Political Science. For Course Objectives and references it is advised that the UGC model CBCS syllabus* concerning relevant courses and topics be provided due importance and primarily consulted.
- *BA General https://www.ugc.ac.in/pdfnews/0693504_BA-with-Pol-Science-.pdf
 - Bengali books are not necessarily substitutes, but supplementary to the English books.
 - The format isstrictly subject to the parameters of the Common Structural Format of the University.

General (Political Science) Courses

Core:

Introduction to Political Theory Comparative Government and Politics Government and Politics in India International Relations

DSE:

Public Administration Indian Foreign Policy Feminism: Theory and Practice Human Rights: Theory and Indian Context

SEC:

Legal Literacy Elementary Dimensions of Research Understanding the Legal System Basic Research Methods

Core Courses

Introduction to Political TheoryCode: PLS-G-CC-1-1-TH+TU

Module I

1. Political Science: nature and scope; Different approaches--- Normative, Behavioural, Post-Behavioural, Marxist, Feminist.

2. State: Contract theory; Idealist theory; Liberal theory; Marxist theory; Gandhian theory. Sovereignty of the State: Monistic and Pluralist theories. Doctrine of Popular Sovereignty.

3. Foundational concepts: Law; Right; Liberty; Equality--- meanings, sources, interrelationships.

4. Key concepts: Nationalism and Internationalism—meanings and features; Democracy--- meaning and nature.

Module II

5. Marxism: Dialectical and Historical Materialism; Class and Class Struggle; Theory of Revolution; Lenin's Theory of Imperialism.

6. Fascism: meaning, features, significance.

7. Political parties and interest groups: functions and role; Methods of representation: territorial, functional, proportional.

Readings:

R. Bhargava and A. Acharya eds., Political Theory: An Introduction.

Mohit Bhattacharya and Amal Roy: Political Theory: Ideas and Institutions.

S. Ramasway: Political Theory: Ideas and Concepts.

O. P Gauba: An Introduction to Political Theory.

- J. C. Johari: Political Theory
- S.P. Verma: Modern Political Theory.

Maurice Cornforth: Dialectical Materialism.

Robin Goodfellow: Marxism in a Nutshell.

Tom Bottomore ed.: A Dictionary of Marxist Thought.

V. I. Lenin: Imperialism--- The Highest Stage of Capitalism.

Margaret Walters: Feminism: A Very Short Introduction.

মোহিত ভট্টাচার্য, বিশ্বনাথ ঘোষঃ আধুনিক রাষ্ট্রবিজ্ঞান অনাদি কুমার মহাপাত্রঃ রাষ্ট্রবিজ্ঞান হিমাচল চক্রবর্তীঃ রাষ্ট্রবিজ্ঞান সত্যসাধন চক্রবর্তীঃ রাষ্ট্রবিজ্ঞান দেবাশীষ চক্রবর্তীঃ রাষ্ট্রতত্ব ও প্রতিষ্ঠান এমিল বার্নসঃ মার্কসবাদ(What is Marxism-এরঅনুবাদ) ভোলানাথ বন্দ্যোপাধ্যায়ঃ দ্বন্দ্বমূলক বস্তুবাদ(মরিস কর্নফোর্থের Dialectical Materialism-এর অনুবাদ) রাজশ্রী বসু ও বাসবী চক্রবর্তী (সম্পা): প্রসঙ্গ মানবীবিদ্যা

Comparative Government and PoliticsCode: PLS-G-CC-2-2-TH+TU

Module I

1 Political System: Liberal-democratic, Authoritarian .Socialist – forms of Political Systems: Unitary and Federal, Parliamentary and Presidential.

2. U.K.: (a) Basic features with major focus on Conventions and rule of Law.

(b) Legislature: composition and functions with major focus on the concept of parliamentary sovereignty. (c) Executive: composition and functions of the Cabinet with major focus on the role of the Prime Minister – the concept of Cabinet Dictatorship; (d) Role of the Crown; (e) Party system – role of the Opposition.

3. U.S.A.: (a) Basic features (b) US federalism (c) Bill of rights (d) Legislature: composition and functions with major focus on the Presiding Officers and Committee System; (e) The Executive: The President: election, powers and functions. US Cabinet: composition and functions; (f) Supreme Court: composition and functions; (g) Party system.

Module II

4. PRC (1982 Constitution):(a) Significance of the Revolution (b) Basic features with special reference to General Principles(c) Communist Party: structure, functions, role (d) Rights and Duties of Citizen (e) The National Government: i) The Executive: President, Premier, State Council, ii) The Legislature: National People' Congress ,Standing Committee iii) The Judiciary.

5. Salient features of the Constitutions of Bangladesh, France, Switzerland.

Readings:

- S. A. Palekar: Comparative Government and Politics.
- J. C. Johari: Major Modern Political Systems.
- The Constitution of the People's Republic of China (1982)
- D.C. Bhattacharya: Modern Political Constitutions.
- A.C. Kapoor and K.K. Misra: Select Constitutions.

নিমাই প্রামাণিকঃ নির্বাচিত আধুনিক শাসন ব্যবস্থার রূপরেখা হিমাচল চক্রবর্তীঃ তুলনামূলক রাজনীতি ও শাসন ব্যবস্থা অনাদি কুমার মহাপাত্রঃ নির্বাচিত শাসন ব্যবস্থা ও রাজনীতি নির্মলকান্তি ঘোষঃ নির্বাচিত তুলনামূলক শাসন ব্যবস্থা ও রাজনীতি দিনেশচন্দ্র ভট্টাচার্যঃ তুলনামূলক রাজনীতি ও বিদেশের শাসন ব্যবস্থা

Government and Politics in IndiaCode: PLS-G-CC-3-3-TH+TU

Module I

1. Evolution of the Constitution (brief). The Preamble; Fundamental Rights. Directive Principles;

2. Union-State Relations – nature of federalism.

3. Union Executive: President, Vice-President, Prime Minister, Council of Ministers.

4. Union Legislature: Lok Sabha and Rajya Sabha--- organisation, functions, law Making procedure, Privileges, Committee System, Speaker.

- 5. The Judiciary: Supreme Court and High Courts--- composition and functions; Judicial Activism in India.
- 6. Constitutional amendment procedure.

7. Government in States: Governor; Council of Ministers and the Chief Minister; State Legislature: composition and functions.

8. Local Government: rural and urban. Significance of 73rd and 74th Amendments.

9. Election Commission and election reforms.

10. Party System in India: national political parties: Ideologies and programmes. Recent trends in India: rise of regional political parties; coalition politics.

11. Regionalism: Nature, roots, types.

12. Varieties of social and political movements: a) caste; tribe; b) religion; c) environment;

d) women's movements.

Readings:

B. Chakrabarty and K. P. Pandey: Indian Government and Politics.

H. Abbas et al.: Indian Government and Politics.

D. Basu: Introduction to the Constitution of India.

M. V. Pylee: India's Constitution.

Subhas Kashyap: Our Constitution.

M.P. Singh and R. Saxena: Indian Politics: Contemporary Issues

J. C. Johari: Indian Government and Politics (2 Vols.)

Rajinder Singh: Social Movements in India.

Devki Jain Ed., Indian Women.

অমল কুমার মুখোপাধ্যায় ও ভোলানাথ বন্দ্যোপাধ্যায়ং সাম্প্রতিক ভারতীয় রাজনীতি ও প্রশাসন নিমাই প্রামাণিকং ভারতের শাসন ব্যবস্থা ও রাজনীতি অনাদি কুমার মহাপাত্রং ভারতের শাসন ব্যবস্থা ও রাজনীতি নির্মলকান্তি ঘোষং ভারতের শাসন ব্যবস্থা ও রাজনীতি অনাদি কুমার মহাপাত্রং ভারতের রাজনীতিক ব্যবস্থা প্রকৃতি ও প্রয়োগ প্রভাত দত্রং প্রসঙ্গ পঞ্চায়েত হিমাংশু ঘোষং সমকালীন ভারতীয় রাজনীতি ও প্রশাসন শাশ্বতী ঘোষং সমতার দিকে আন্দোলনে নারী

International RelationsCode: PLS-G-CC-4-4-TH+TU

Module I

1. International Relations as a field of study. Approaches:

(a) Classical Realism (Hans Morgenthau) and Neo-Realism (Kenneth Waltz)

(b) Neo-Liberalism: Complex Interdependence (Robert O. Keohane and Joseph Nye)

(c) Structural Approaches: World Systems Approach (Immanuel Wallerstein) and Dependency School (Andre Gunder Frank)

(d) Feminist Perspective (J. Ann Tickner)

2. Cold War:(a) Second World War & Origins of Cold War; (b) Phases of Cold War: First Cold War; Rise and Fall of Detente Second Cold War.

3. End of Cold War and Collapse of the Soviet Union

(b) Post Cold- War Era and Emerging Centers of Power (European Union, China, Russia and Japan) 4. India's Foreign Policy

(a) Basic Determinants (Historical, Geo-Political, Economic, Domestic and Strategic); (b) India's Policy of Non-Alignment; (c) India as emerging Power

Readings:

William, P., Goldstein, D. M. and Shafritz, J. M. (eds.): Classic Readings of InternationalRelations.
Goldstein, J. and Pevehouse, J.C.: International Relations.
Art, R. J. and Jervis, R. (eds.): International Politics: Enduring Concepts andContemporary Issues.
Jackson, R. and Sorenson, G.: Introduction to International Relations: Theories andApproaches.
Tickner, J. A.: Gendering World Politics: Issues and Approaches in the Post-Cold WarEra.
Baylis, J. and Smith, S. (eds.): The Globalization of World Politics: An Introduction toInternational Relations.
Wenger, A. and Zimmermann, D. (eds.): International Relations: From the Cold WorldWar to the Globalized World.
Vanaik, A.: India in a Changing World: Problems, Limits and Successes of Its ForeignPolicy.
Basu, Rumki (ed.): International Politics: Concepts theories and Issues, New Delhi.
Mewmillians, W.C. and Piotrowski, H.: The World since 1945: A History ofInternational Relations.
Smith, M., Little, R. and Shackleton, M. (eds.): Perspectives on World Politics.
Ganguly, S. (ed.): India's Foreign Policy: Retrospect and Prospect.

গৌতম বসু: আন্তর্জাতিক সম্পর্ক: তত্ব ও বিবর্তন রাধারমণ চক্রবর্তী ও সুকল্পা চক্রবর্তী: সমসাময়িক আন্তর্জাতিক সম্পর্ক পুরুষোত্তম ভট্টাচার্য ও অনিন্দ্যজ্যোতি মজুমদার (সম্পা):আন্তর্জাতিক সম্পর্কের রূপরেখা রুমকী বসু ও অঙ্গনা ঘোষঃ সম্মিলিত জাতিপুঞ্জ অনীক চট্টোপাধ্যায়: ঠাণ্ডাযুদ্ধের পর আন্তর্জাতিক সম্পর্ক নির্মলকান্তি ঘোষঃ আন্তর্জাতিক সংগঠন ও জাতিপুঞ্জ গৌরীপদ ভট্টাচার্যঃ আন্তর্জাতিক সম্পর্ক শক্তি মুখার্জী, ইন্দ্রাণী মুখার্জীঃ আন্তর্জাতিক সম্পর্ক

Discipline-specific Electives

The choice is between Courses in 1A and 1B and between Courses in 2A and 2B--- one each from the two segments offered.

Public AdministrationCode: PLS-G-DSE-A-5-1A-TH+TU

Module I

1. Nature and Scope of Public Administration.

2. Key Concepts: Hierarchy; Unity of Command; Span of Control; Authority;

Centralization and Decentralization; Line and Staff; Communication and Control; Delegation; Decision-making;Coordination and Leadership.

3. Major Approaches: New Public Administration; Comparative Public Administration; Development Administration; New Public Management.

 Bureaucracy: Views of Weber and Marx.
 Public Policy: Formulation and Implementation.
 Major Programmes (basic features and objectives): MGNREGA; Sarva Shiksha Abhiyan; National Rural Health Mission.

Readings:

Mohit Bhattacharya: Public Administration: Structure, Process and Behaviour.
A. Avasthi and S. Avasthi: Pubic Administration.
M. Bhattacharya: Restructuring Public Administration.
M.P. Sharma: Public Administration in Theory and Practice.
Rumki Basu: Public Administration: Concepts and Theories.
Sapru, R.K. Public Policy: Formulation, Implementation and Evaluation. New Delhi: Sterling Publishers.

মোহিত ভট্টাচার্য ও বিশ্বনাথ ঘোষ: জনপ্রশাসন ও পরিকল্পনা সোমা ঘোষ: জনপ্রশাসন: তত্ব ও প্রয়োগ রাজশ্রী বসু: জনপ্রশাসন

Indian Foreign PolicyCode: PLS-G-DSE-A-5-1B-TH+TU

Module I

- 1. Foreign Policy: meaning and determinants.
- 2. National Interest as key concept in foreign policy.
- 3. Instruments of foreign policy: diplomacy; propaganda; military.

Module II

- 4. Evolution of Indian foreign policy.
- 5. Basic principles of Indian foreign policy.

6. India and her neighbours: Bangladesh; Pakistan; Nepal; Sri Lanka.

Readings:

K.K Ghai, International Relations: Theory and Practice of International Politics
Vinay Kumar Malhotra, International Relations, Fourth edition, Vikas Publications.
Peu Ghosh, International Relations, Pretince Hall Publishers.
Pushpesh Pant, International Relations in the Twenty-first Century, Tata McGraw Hill Publishers.
Prakash Chander and Prem Aroa, International Relations and Comparative Politics, Cosmos Bookhive Publicaitons.
Aneek Chatterjee, Neighbours, Major Powers and Indian Foreign Policy, Orient Blackswan.

Prem Arora, Foreign Policy of India, Cosmos Bookhive Publishers.

Feminism: Theory and PracticeCode: PLS-G-DSE-B-6-2A-TH+TU

Module I

- 1. Distinction between sex and gender. Biologism and Social Constructivism.
- 2. Patriarchy and Feminism.
- 3. Theoretical foundation: Liberal; Socialist; Marxist; Radical Feminism; New Feminist ideas

- 4. Traditional historiography and Feminist critiques.
- 5. Social reform movements and position of women: Indian context.
- 6. Gender relations in family: consumption; entitlement; property rights.

Readings:

B. Hooks, (2010) 'Feminism: A Movement to End Sexism', in C. Mc Cann and S. Kim (eds), *The Feminist Reader: Local and Global Perspectives,* New York: Routledge, pp. 51-57
R. Delmar, (2005) 'What is Feminism?', in W. Kolmar & F. Bartkowski (eds) *Feminist Theory: A Reader,* pp. 27-37.

U. Chakravarti, (2003) *Gendering Caste through a Feminist Len,* Kolkata, Stree, pp. 139-159. C. MacKinnon, 'The Liberal State' from *Towards a Feminist Theory of State,* Available at http://fair-use.org/catharine-mackinnon/toward-a-feminist-theory-of-the-state/chapter-8 N. Menon (2008) 'Gender', in R. Bhargava and A. Acharya (eds), *Political Theory: An Introduction,* New Delhi: Pearson, pp. 224-233.

রাজশ্রী বসু ও বাসবী চক্রবর্তী (সম্পা): প্রসঙ্গ মানবীবিদ্যা

Human Rights: Theory and Indian ContextCode: PLS-G-DSE-B-6-2B-TH+TU

Module I

- 1. History of the idea of human rights; Evolution of generations of human rights.
- 2. Universal Declaration of Human Rights: provisions and significance.

3. UN and human rights: charters; UN Human Rights Commission; Vienna Declaration and Programme of Action.

Module II

- 4. Indian Constitution and the foundation of rights.
- 5. National and State Human Rights Commissions: structure and functions.
- 6. Human rights in India: problems and remedies.

Readings:

Universal Declaration of Human Rights, www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf

Alok Kumar Meena, Human Rights in India: Concepts and Concerns, India: Pointer Publishers.
S.C. Joshi, Human Rights: Concepts, Issues and Laws, India: Akansha Publishing House.
Amit Bhattacharya and Bimal Kanti Ghosh (eds.), Human Rights in India, Historical Perspective and Challenges Ahead.
D. O'Byrne, (2007) 'Theorizing Human Rights', in Human Rights: An Introduction, Delhi, Pearson.
M. Ishay, (2004) The History of Human Rights: From Ancient Times to the Globalization Era, Delhi: Orient Blackswan.

Skill Enhancement Courses

[The choice lies between Courses 1 and 2 of Section A and Courses 1 and 2 of Section B. One particular course in Gr. A --- between PLS-G-SEC-3/5-A(1)-TH and PLS-G-SEC-3/5-A(2)-TH is to be chosen either in Sem-III or in Sem-V. One particular course in Gr. B--- between PLS-G-SEC-4/6-B(1)-TH and PLS-G-SEC-4/6-B(2)-TH is to be chosen either in Sem IV or in Sem VI]

Legal Literacy Code: PLS-G-SEC-3-A(1)-TH

Module I

1. Legal Issues of Criminal Jurisdiction: History, Definition and Concept, Major Processes— Detention, Arrest, Bail, Search and Seizure.

2. Indian Penal Code: History, Definition. Major Aspects—Protection of Primary and Secondary Personal Rights, Criminal Conspiracy, Offences against the State, Offences related to Marriage.

3. Personal Laws: Laws related to Marriage (examples from Hindu, Islam and Christian Laws).

Module II

4. Consumer Rights Laws: Definition of Consumer Rights, Process of filing a complaint. Right to Information Act: provisions; importance.

5. Anti-Terror Laws: Meaning, Terrorist and Disruptive Activities (Prevention) (TADA) Act 1987, 2002 and Prevention of Terrorism (POTA) Act 2002.

6.Human Rights Laws: Meanings, Universal Declaration of Human Rights (UDHR), Human Rights Act of 1993, Issues of rights of Children and Women.

Readings:

K. Sankaran and U. Singh, *Towards Legal Literacy*, New Delhi: Oxford University Press, 2008. Articles on Laws relating to criminal justice and offences against Women.

Oxford Handbook of Human Rights and Criminal Justice in India- The system and Procedure. New Delhi: Oxford University Press, 2006. Relevant articles on FIR, Detention, Bail.

M. Mohanty et al., Weapon of the Oppressed, Inventory of People's Rights in India, Delhi: Danish Books, 2011. Articles on Adivasis and Dalits.

S. Durrany, The Protection of Women From Domestic Violence Act 2005, New Delhi: Indian Social Institute, 2006.

V. Kumari, (2008) 'Offences Against Women', in K, Sankaran and U. Singh (eds.) *Towards Legal Literacy*, New Delhi: Oxford University Press.

P. D. Mathew, (2004) *The Measure to Prevent Sexual Harassment of Women in Work Place.* New Delhi: Indian Social Institute.

D. Srivastva, (2007) 'Sexual Harassment and Violence against Women in India: Constitutional and Legal Perspectives', in C. Kumar and K. Chockalingam (eds) *HumanRights, Justice, and Constitutional Empowerment*, Delhi: Oxford University Press.

S. Naib, (2013) 'Right to Information Act 2005', in *The Right to Information in India*, New Delhi: Oxford University Press, Available at

http://www.humanrightsinitiative.org/publications/rti/guide_to_use_rti_act_2005_English2012_light_Aspire.pdf. Bare Acts:

Consumer Protection Act, 1986, http://chdslsa.gov.in/right_menu/act/pdf/consumer.pdf. *Criminal law Amendment Act, 2013*, http://egazette.nic.in/WriteReadData/2013/E_17_2013_212.pdf 10.04.2013.

Protection of Women Against Domestic Violence Act, 2005, http://wcd.nic.in/wdvact.pdf.

Right to Information Act, 2005, http://righttoinformation.gov.in/rti-act.pdf.

Scheduled Castes and Scheduled Tribes Prevention of Atrocities Act, 1989,

http://tribal.nic.in/writereaddata/linkimages/poaact989E4227472861.pdf.

Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006,

http://tribal.gov.in/writereaddata/mainlinkFile/File1033.pdf.

The Persons with Disabilities (Equal Opportunities, Protection of Rights, Full Participation) Act, 1995,

http://bhind.nic.in/Sparsh_disability%20act%201995.pdf.

The Right of Children to Free and Compulsory Education Act, 2009, http://www.delta.org.in/form/rte.pdf.

The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Bill, 2012,

http://164.100.24.219/BillsTexts/LSBillTexts/PassedLoksabha/144C_2010_LS_Eng.pdf.

Criminal Law Amendment Act, 2013, mha.nic.in/pdfs/TheCrimnalLaw030413.pdfFile Format: PDF/Adobe Acrobat –Quick View

Elementary Dimensions of Research

Code: PLS-G-SEC-4-B(1)-TH

Module I

1. Concepts, variables (dependent and independent), propositions and hypothesis.

- 2. Research design: definition, purpose of research, units of analysis, fallacies.
- 3. Ethics in research---issues and problems.
- 4. Research Report writing.

Module II

4. Sources and Techniques of data collection – quantitative and qualitative data

5. Sampling: definition, probability and non-probability. Scales and Measurement

6. Statistical method of data analysis: descriptive and inferential (Overview). Graphic representation of data (Bar graph, Histogram, Pie Chart)

Readings:

R. Kumar, Research Methodology: A Step-by-Step Guide for Beginners, Sage pub., 2010.W.L. Neuman, Social Research Methods: Qualitative and Quantitative Approaches, Pearson.R. Chatterjee, (1979) Methods of Political Enquiry, Calcutta: The World Press Pvt. Ltd.

Understanding the Legal System Code: PLS-G-SEC-5-A(2)-TH

Module I

1. Historical background, procedures of Supreme Court and High Court in India (special focus on writ jurisdictions), Judicial Activism and Judicial Restraint.

2. Public Interest Litigation (PIL): Meaning, major features and Scope, principles, Major Guidelines for admitting PIL.

3. Administrative Tribunals: Concepts and major Features, tribunals for other matters.

Module II

4. Subordinate Courts: Constitutional provisions, structure and jurisdiction, National Legal Services Authority, Lok Adalats, Family Courts and Gram Nyayalayas.

5. Elections Laws: Representation of People Act 1950, Representation of People Act 1951, Delimitation Act 2002.

6. Other Constitutional Dimensions: Anti-defection Laws (major provisions of 91st Amendment Act, 2003), Cooperative Societies (provisions of 97th Amendment Act), Mahila Courts.

Readings:

Creating Legal Awareness, edited by Kamala Sankaran and Ujjwal Singh (Delhi: OUP, 2007)

Asha Bajpai, Child Rights in India: Law, Policy, and Practice, Oxford University Press, New Delhi, 2003.

B.L. Wadhera, *Public Interest Litigation - A Handbook*, Universal, Delhi, 2003.

P.C. Rao and William Sheffiled Alternate Dispute Resolution: What it is and How it Works, Universal Law Books and Publishers, Delhi, 2002

J. Kothari, (2005) 'Criminal Law on Domestic Violence', *Economic and Political Weekly*, Vol. 40(46), pp. 4843-4849. H. Mander, and A. Joshi, *The Movement for Right to Information in India, People's Power for the Control of Corruption*, http://www.rtigateway.org.in/Documents/References/English/Reports/12.%20An%20article%20on%20RTI%20by%20Ha rsh%20Mander.pdf.

M, Mohanty et al. (2011) *Weapon of the Oppressed, Inventory of People's Rights in India*. Delhi: Danish Books. Centre for Good Governance, (2008) *Right to Information Act, 2005: A Citizen's Guide*,

http://www.rtigateway.org.in/Documents/Publications/A%20CITIZEN'S%20GUIDE.pdf

K. Sankaran and U. Singh, *Towards Legal Literacy*, New Delhi: Oxford University Press, 2008.

Oxford Handbook of Human Rights and Criminal Justice in India- The system and Procedure, New Delhi: Oxford University Press. Relevant articles.

Basic Research MethodsCode: PLS-G-SEC-6-B(2)-TH

Module I

1. Case study.

2. Survey Approach: Interviewing- different types and forms, qualities of a good interviewer; Preparing questionnaire, types of questionnaire. Pilot Survey.

3. Focus Groups: role of researcher; uses and abuses.

Module II

4. Experimental research: types. Aggregate Data analysis: sources, utility and limitations.

- 5. Content Analysis: major issues.
- 6. Participant observation: modes, advantages and disadvantages.

Readings:

R. Chatterjee, (1979) Methods of Political Enquiry, Calcutta: The World Press Pvt. Ltd.

D. E. McNabb, (2004) Research Methods for Political Science- Quantitative and Qualitative Methods, New Delhi: Prentice-Hall of India Pvt. Ltd.



UNIVERSITY OF CALCUTTA

Notification No. CSR/ 12/18

It is notified for information of all concerned that the Syndicate in its meeting held on 28.05.2018 (vide Item No.14) approved the Syllabi of different subjects in Undergraduate Honours / General / Major courses of studies (CBCS) under this University, as laid down in the accompanying pamphlet:

List of the subjects

<u>SI.</u>	Subject	<u></u>	Subject		
NO.	· · · ·	<u>No.</u>			
1	Anthropology (Honours / General)	29	Mathematics (Honours / General)		
2	Arabic (Honours / General)	30	Microbiology (Honours / General)		
3	Persian (Honours / General)	31	Mol. Biology (General)		
4	Bengali (Honours / General /LCC2 /AECC1)	32	Philosophy (Honours / General)		
5	Bio-Chemistry (Honours / General)	. 33	Physical Education (General)		
6	Botany (Honours / General)	34	Physics (Honours / General)		
7	Chemistry (Honours / General)	35	Physiology (Honours / General)		
8	Computer Science (Honours / General)	36	Political Science (Honours / General)		
9	Defence Studies (General)	37	Psychology (Honours / General)		
¹ 10	Economics (Honours / General)	38	Sanskrit (Honours / General)		
11	Education (Honours / General)	39	Social Science (General)		
12	Electronics (Honours / General)	40	Sociology (Honours / General)		
13	English ((Honours / General/ LCC1/ LCC2/AECC1)	41	Statistics (Honours / General)		
14	Environmental Science (Honours / General)	42	Urdu (Honours / General /LCC2 /AECC1)		
15	Environmental Studies (AECC2)	43	Women Studies (General)		
16	Film Studies (General)	44	Zoology (Honours / General)		
17	Food Nutrition (Honours / General)	45	Industrial Fish and Fisheries - IFFV (Major)		
18	French (General)	46	Sericulture - SRTV (Major)		
19	Geography (Honours / General)	47	Computer Applications - CMAV (Major)		
20	Geology (Honours / General)	48	Tourism and Travel Management – TTMV (Major)		
21	Hindi (Honours / General /LCC2 /AECC1)	49	Advertising Sales Promotion and Sales		
			Management – ASPV (Major)		
22	History (Honours / General)	50	Communicative English – CMEV (Major)		
23	Islamic History Culture (Honours / General)	51	Clinical Nutrition and Dietetics CNDV (Major)		
24	Home Science Extension Education	52	Bachelor of Business Administration (BBA)		
	(General)		(Honours)		
25	House Hold Art (General)	53	Bachelor of Fashion and Apparel Design –		
			(B.F.A.D.) (Honours)		
26	Human Development (Honours / General)	54	Bachelor of Fine Art (B.F.A.) (Honours)		
27	Human Rights (General)	55	B. Music (Honours / General) and Music		
			(General)		
28	Journalism and Mass Communication				
	(Honours / General)				

The above shall be effective from the academic session 2018-2019.

SENATE HOUSE KOLKATA-700073 The 4th June, 2018

(Dr. Santanu Paul) Deputy Registrar

SOCIOLOGY B.A. (HONOURS)

SYLLABUS

Under Choice Based Credit System (CBCS)

UNIVERSITY OF CALCUTTA 2018 Note:

- ***** Attendance: 10 marks per paper
- ✤ Internal Assessment: 10 marks per paper
- Core Courses, Discipline Specific Elective and Generic Elective Courses: (TU+Th=15+65) = (1+5 credits each) = 6 Credits each
- Skill Enhancement Courses: (Th=2 credits each) =2 Credits each

Course Distribution:

- ➢ Core Course: 14: 6 Credits each
 - 2 Courses each in Semesters 1 and 2
 - 3 Courses each in Semesters 3 and 4
 - 2 Courses each in Semesters 5 and 6
- Elective Courses:
 - i. Discipline Specific Elective DSE:4: 6 Credits each
 - 2 Courses each in Semesters 5 and 6, taking one from each group -A & B
- ii. Skill Enhancement Elective: 2 : 2 credits each
 - 1 Course each in Semesters 3 and 4
- iii. Generic Elective: 4 : 6 Credits each
 - 1 Course each in Semesters 1, 2, 3 and 4

Important Note:

- UGC Model Syllabus for Sociology has been followed while framing the Syllabus Below. Reference:https://www.ugc.ac.in/pdfnews/6144453 _BA-Honours Sociology.pdf
- The Readings provided below include many of those of the UGC Model CBCS Syllabus in Sociology.
- ✤ The format is subject to the common structural CBCS format of the University.

Suggested Mode for 15 Marks Tutorial Segment:

- <u>Written Mode:</u>15 marks written evaluation by college CT (Class test) (7th/8th week of the semester); Upto 1200 words Term papers- (1/2@ 500/600 Words each) Book review/ Excerpt review/ Comprehension- Syllabus based Topic selection by College
- <u>Presentation Mode</u>: Paper or Report Presentation/Poster presentation (may be in groups) (In whichever paper it is suitable)/ Fieldwork and Report writing on Syllabus based topics or Current topics.

[All modes/ themes/ topic of the tutorial related segments to be decided by concerned faculty of respective colleges.]

	LIST OF COURSES FOR HONOURS PROGRAM				
	CORE COURSE		(6 Credits per Core Course)		
Semesters	Subject-Hon-Core-Semester-Paper-Th&TU		14 - CORE COURSES		
1 st Semester SOC-A-CC -1-1-TH&TU		Introductory Sociology I			
	SOC-A-CC -1-2-TH&TU		Sociology of India-I		
2 nd Semester SOC-A-CC -2-3-TH&TU		Introductory Sociology-II			
	SOC-A-CC -2-4-TH&TU		Sociology of India II		
	SOC-A-CC -3-5-TH&TU		Political Sociology		
3 rd Semester	SOC-A-CC -3-6-TH&TU		Sociology of Religion		
	SOC-A-CC -3-7-TH&TU		Sociology of Gender and Sexuality		
	SOC-A-CC -4-8-TH&TU		Economic Sociology		
4 th Semester	SOC-A-CC -4-9-TH&TU		Population Studies		
	SOC-A-CC -4-10-TH&TU		Social Stratification		
5 th Semester	SOC-A-CC -5-11-TH&TU		Sociological Thinkers I		
	SOC-A-CC -5-12-TH&TU		Research Methods – I		
6 th Semester	SOC-A-CC -6-13-TH&TU		Sociological Thinkers-II		
	SOC-A-CC -6-14-TH&TU		Research Methods – II		
	ELEO	TIVE CO	URSES		
	SKILL ENHANCM	ENT COURS	E(2 Credits per Course)		
GROUP-A:	An	y 1 Paper in	Semester-3		
3^{rd}	SOC-A-SEC- 3-A(1)-TH	Reading, W	Vriting and Interpretation in Sociology		
Semester	SOC-A-SEC- 3-A(2)-TH	Gender Ser	nsitization		
GROUP-B:	Any I Paper in Semester-4	Ctatiatical 1	Dessenting for Socielagy		
4 Somostor	SOC-A-SEC- 4-B (1)-1H SOC A SEC 4 $P(2)$ TH	Statistical I	Reasoning for Sociology		
Semester	DISCIDI INE SDECIEI	Theory and	VE (6 Credita por Course)		
	CROUP-A	Any 1 naner	in Semester-5		
SOC-A-DSE-	- 5 - A(1)-TH&TU	Urban Soci	ology		
SOC-A-DSE-	- 5 -A(2)-TH&TU	Sociology	of Work and Industry		
	GROUP-A:	Any 1 paper	in Semseter-6		
SOC-A-DSE- 6 -A(3)-TH&TU Environme			ntal Sociology		
SOC-A-DSE- 6 -A(4)-TH&TU Agrarian S			bociology		
	GROUP-B:	Any 1 paper	· in Semester-5		
SOC-A-DSE-5 -B(1)-TH&TUIndia Sociological Traditions			logical Traditions		
SOC-A-DSE-	SOC-A-DSE-5 -B(2)-TH&TU Sociology of Visual Culture and Media				
GROUP-B: Any 1 paper in Semester-6					
SOC-A-DSE-	-6 -B(3)-TH&TU	Sociology of	t Health and Medicine		
SOC-A-DSE-	SOC-A-DSE-6 -B(4)-TH&TU Project: Fieldwork And Dissertation				
GENERIC ELECTIVE (6 Credits per Course)					
 Note: Core Courses Designed for General Program will be offered as Generic Elective course for students of Other Discipline 					

Course Structure	e for B.A.	(Honours)

Course Components	B.A. Honours			
Core Course (CC)	14			
Language Core Course (LCC)	0			
Generic Elective (GE)	4**			
Discipline Specific Elective (DSE)	4			
Ability Enhancement Compulsory Course (AECC)	2			
Skill Enhancement Elective Course (SEC)	2			
Total no. of courses	26			
**Covering two subjects				

Semester Wise Courses for B.A . (Honours)

	Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6
Core Course (CC)	2Th+2TU	2Th+2TU	3Th+3TU	3Th+3TU	2Th+2TU	2Th+2TU
	CC-1 & 2	CC-3&4	CC-5,6 &7	CC-8, 9 & 10	CC-11 & 12	CC-13&14
Elective Courses:						
i)Generic Elective (GE)	1Th+1 TU	1Th+1 TU	1Th+1 TU	1Th+1 TU		
	GE-1	GE-2	GE-3	GE-4		
ii)Discipline Specific					2Th+2 TU	2Th+2 TU
Elective (DSE)					DSE-A(1)	DSE-B(2)
					DSE-B(1)	DSE-B(2)
Ability Enhancement	1Th+0 TU	1Th+0TU				
Compulsory Course	AECC-1	AECC-2				
(AECC)						
Skill Enhancement			1Th+0TU	1Th+0TU		
Course(SEC)			SEC-A(1)	SEC-B(2)		
Total No. of Courses and	4 x 100=400	4 x 100 =400	5 x 100 =500	5 x 100 =500	4 x 100 =400	4 x 100 =400
Marks						
Total Credits	20	20	26	26	24	24
			Th= Theory TU=Tutorial			

CC/GE/ DSE : Each Theory and Practical Course have 4 and 2 Credits respectively/ Each Theory and Tutorial Course have 5 and 1 Credit(s) respectively

GE: Covering two disciplines with two courses each; any discipline in any semester; CC of a different subject in General course is to be treated as GE for Honours Course

✤ DSE/SEC: Choice must be group specific to each semester.

✤ AECC/SEC : Each Course has 2 Credits

♦ AECC-1: Communicative English / MIL; AECC-2: Environmental Studies

SEMESTER-1

CC-1

Introductory Sociology- I

1. Sociology: Discipline and Perspective

1.1 Thinking Sociologically

1.2 Emergence of Sociology, Sociology as a science; Sociology and Common Sense

1.3Some Basic Concepts: Association; Aggregates: Community, Categories, Groups and its Forms; Status and Role; Norms and Values.

1.4Individual and Society; Socialization: Concept and Agencies; Culture – meaning and characteristics; Types of culture – popular, elitist, folk, and consumer cultures; Pluralism and Multiculturalism, Culture and Personality.

2. Sociology and Other Social Sciences

- 2.1 Sociology and Social Anthropology
- 2.2 Sociology & Psychology
- 2.3 Sociology & History

3. Human Society

- 3.1 Social Institutions and Social Processes
- 3.2 Social control: meaning, agencies and mechanisms
- 3.3 Conformity and Deviance.
- 3.4 Social Change, definition, factors, Social Mobility

Readings:

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- 4. Alex Thio: Sociology
- 5. Andre, Beteille, 2009, *Sociology: Essays in Approach and Method*, Delhi: Oxford University Press, Chapter 1, 'Sociology and Common Sense', Pp. 13-27
- 6. Anthony Giddens : Sociology
- 7. G. Rocher: A General Introduction to Sociology
- 8. George Ritzer. Encyclopaedia of sociology
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16. T. Bottomore : Sociology-A Guide to Problems and Literature

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- 8. Firth, Raymond, 1956, *Human Types*, Thomas Nelson & Sons, Chapter 3, Work and Wealth of Primitive Communities', Pp. 71-97
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CC-2

<u>Sociology of India – I</u>

1. India: An Object of Knowledge

1.1 The Colonial Discourse

1.2 The Nationalist Discourse

1.3 The Subaltern Critique

2. Indian Society: Concepts and Institutions

2.1. Caste: Concept and Critique

2.1.1 Varna & Jati; Dominant Caste

2.1.2 Jajmani System; Caste Mobility: Sanskritization

2.2. Agrarian Classes

2.2.1 Nature of Agrarian Class

2.3. Tribe: Profile and Location

2.3.1 Features

2.3.2 Regional Distribution

2.4. Village: Structure and Change

2.4.1 Village Solidarity

2.4.2 Internal Regulation

2.5. Kinship: Principle and Pattern

2.6. Religion and Society

2.6.1 Role of Religion

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- 3. A. Beteille. Caste, Class and Power: Changing Patterns
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- 8. Ghanshyam Shah. Caste and Democratic Politics in India
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- 11. K. L. Sharma Social Stratification and Mobility
- 12. K. L. Sharma Social Stratification in India
- 13. M. N. Srinivas Caste Its Twentieth Century Avatar
- 14. M. N. Srinivas Social Change in Modern India

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- 30. Yogendra Singh Social Change in India
- 31. Yogendra Singh The Modernization of Indian Tradition

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SEMESTER-2
СС-3

Introductory Sociology – II

1. On the Plurality of Sociological Perspective

2. Functionalism

- 2.1 General arguments;
- 2.1 Contributions of Parsons and Merton;
- 2.2 Critical overview.

3 Interpretive Sociology

- 3.1 General arguments;
- 3.2 Contributions of Weber

4 Conflict Perspective

- 4.1 General arguments;
- 4.2 Contributions of Dahrendorf and Coser;
- 4.3 Critical overview

5 Structuralism

- 5.1 General arguments;
- 5.2 Contributions of Levi-Strauss

6 Feminist Perspective

- 6.1 General arguments;
- 6.2 Stages of development of feminism;
- 6.3 Varieties of feminist sociology.

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- 15. Stevi Jackson and Jackie Jones 1998. Contemporary Feminist Theories; NYU Press
- 16. Thompson, Kenneth and Jeremy Tunstall, Sociological Perspectives, New York: Penguin Books Ltd
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- 4. Interaction in Everyday Life', Pp. 247-280
- 5. Jackson, S. and S. Scott (eds.), 2002, Gender: A Sociological Reader,
- 6. London: Routledge, Introduction, Pp. 1-26
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- 10. Routledge, Pp. 690-693, Press Chapter 9 & 10, Pp. 178-204

<u>Sociology of India – II</u>

1. Ideas of India

- 1.1. Gandhi and Ambedkar
 - 1.1.1 Gandhi on Harijan
 - 1.1.2 Ambedkar: Dalit & Hindu Society
- 1.2. Indological and Ethnographic Approaches

2. Resistance, Mobilization, Change

- 2.1. Dalit Politics
- 2.2. Mobility and Change
- 2.3. Women's Movement
- 2.4. Peasant Movements
- 2.5. Ethnic Movements
- 2.6. Middle Class Phenomenon

3. Challenges to Civilization, State and Society

- 3.1. Communalism: Factors and Control measures
- 3.2. Secularism: Significance, Issues and Challenges
- 3.3. Nationalism: Concept and Growth Factors

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SEMESTER-3

Political Sociology

1. Contextualising the study of Politics

2. Basic Concepts

2.1**Power and Authority**: Meaning and types of influence, characteristics and distribution of power

2.2State, Governance and Citizenship: State-Society Relations, Concept of Citizenship, Rights, Obligations and Civil society2.3Elites and the Ruling Classes: Nature and types

3. Political Systems

3.1 Segmentary: Meaning and Characteristics

3.2 Totalitarian and Democratic: Meaning and Characteristics

4. Everyday State and Local Structures of Power in India

4.1 Caste, Class and Patriarchy

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Sociology of Religion

1. Religion as a Sociological Concept

- 1.1 Formulating Religious
- 1.2 Durkheim: Scared and Profane
- 1.3 Marx: Religion as Ideological weapon
- 1.4 Weber: Religious Ethics and Economy
- 1.5 Religion and Everdaylife

2. Elements of Religious

- 2.1 Sacred, Myth, Ritual
- 2.2 Time-Space
- 2.3 Rationality

3. Religion and Society: Contemporary Direction

- 3.1 Religious Fundamentalism
- 3.2 Secularism and Communalism: Meaning, Characteristics and Factors
- 3.3 Religious Pluralism
- 3.4 Diversity in Religion and Identity: Class, Gender, Sexuality

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<u>CC-7</u>

Sociology of Gender and Sexuality

1. Gendering Sociology: An overview

2. Gender as a Social Construct

2.1. Gender, Sex and Sexuality, Gender stereotyping and socialization, Gender role and identity

2.2. Gender stratification and inequality, Gender discrimination and patriarchy, Production of Masculinity and Femininity,

3. Gender: Differences and Inequalities

- 3.1 Class, Caste
- 3.2 Family, Work
- 3.3 Third Gender
- 3.4 Sexual violence

4. Gender, Power and Resistance

- 4.1 Power and Subordination
- 4.2 Resistance and Movements (Chipko/ Gulabi Gang)

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- 13. Kalia, H.L. 2005. Work and the Family. Jaipur: Rawat Publications.
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- Stanley, L. 2002. 'Should Sex Really be Gender or Gender Really be Sex', in S. Jackson and S. Scott (eds.) Gender: A Sociological Reader, London: Routledge (pp31-41).
- U. Kalpagam. 2000. The Women's Movement in India Today-New Agendas and Old Problems - Feminist Studies Vol. 26, No. 3, Autumn, 2000
- 9. Uberoi, Patricia "Feminine Identity and National Ethos in Indian Calendar Art" In Economic and Political Weekly Vol. 25, No. 17 (Apr. 28,1990), (pp WS 41-48).
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SEMESTER-4

Economic Sociology

1. Perspectives in Economic Sociology

- 1.1 Formalism and Substantivism
- 1.2 New Economic Sociology

2. Forms of Exchange

- 2.1 Reciprocity and Gift
- 2.2 Exchange and Money

3. Systems of Production and Consumption

- 3.1 Hunting and Gathering
- 3.2 Domestic Mode of Production
- 3.3 Peasant the Indian scenario: Land revenue systems; Land reforms
- 3.4 Capitalism
- 3.5 Socialism

4. Some Contemporary Issues in Economic Sociology

4.1 Development and Globalisation

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- 4. Dube, S C: Kamar, Oxford. Chapter 2, the Economic Life.
- 5. Granovetter, Mark: Economic Action and Social Structure in Granovetter and Swedberg (ed): The Sociology of Economic Life, Westview Press
- 6. Harrison, David: Sociology of Modernisation and Development, London, Unwin Hyman
- 7. Haynes, Jeffrey: Development Studies, Polity.
- LeClaire and Schneider (ed): Economic Anthropology. Rinehart and Winston

 <u>Three articles</u> :(i) Karl Polanyi: The Economy as instituted process; (ii) George Dalton: Economic theory and primitive society; and (iii) Richard F. Salisbury: Anthropology and Economics
- 9. Mair, Lucy : An Introduction to Social Anthropology;
- 10. N M C Machado: Karl Polanyi and New Economic Sociology : Notes on the Concept of Disembeddedness (article in PDF on Google) ;
- 11. Polanyi: Ibid. Chapter also available in Granovetter and Schneider (ed) The Sociology of Economic Life

- 12. Sen, Sunanda. 2007. Globalization and Development National Book Trust, 2007/2011.
- 13. Srinivas, M N: The Remembered Village, Oxford. Chapter IV, The Universe of Agriculture.
- 14. Sur, Basabi: The Economic and the Non-economic, World View, Kolkata
- 15. Weber, Max: Essays in Economic Sociology, ed. by Swedberg, Princeton University Press. Chapter sixteen, 'Sociological categories of economic action'

- 1. Kumar, Dharma: The Cambridge Economic History of India Vol. II. Orient Longman
- 2. Polanyi, Karl : The Livelihood of Man. Academic Press
- 3. Smelser, Neil J. and Swedberg, Richard (ed) : The Handbook of Economic Sociology, Princeton University and Russell Sage Foundation
- 4. Weber, Max: Economy and Society. Ed. by Roth and Wittich. California Press, Berkley. Chap. Sociological categories of economic action

Population Studies

1. Introducing Population Studies

- 1.1 Definition, Nature and Scope
- 1.2 Demography and Sociology
- 1.3 Concepts and Approaches:
 - 1.3.1 Malthusian perspective
 - 1.3.2 Marxist perspective
 - 1.3.3 Demographic Transition theory

2. Population, Social Structure and Processes

- 2.1 Population Size and Growth
- 2.2 Fertility, Culture and fertility.
- 2.3 Mortality, Determinants, Reproduction and Mortality

3. Population, Gender and Migration

- 3.1 Women, Family, Status and fertility
- 3.2 Society and New Reproductive Technologies
- 3.3 Migration, Types and consequences.

4. Population Dynamics and development

- 4.1 Population as constraint and resources of development.
- 4.2 Population programmes and policies in India.

- 1. Agarwala, S.N. India's population problem.
- 2. Chandra, S. Population pattern and social change in India.
- 3. Cox. P. Demography
- 4. Haq, Ehsanul. 2007. 'Sociology of Infant Mortality in India', Think India Quarterly, July-September, 10(3): 14-57.
- 5. Heer, David. M. Society and Population.
- Patel, Tulsi. 2007. 'Female Foeticide: Family Planning and State Society Intersection in India'. In T. Patel (ed.). Sex-selective Abortion in India: Gender, Society and New Reproductive Technologies. New Delhi: Sage Publications, pp. 316-356.
- 7. Premi, Mahendra K. 2006. 'Population Composition (Age and Sex)', Population of India: In the New Millennium. New Delhi: National Book Trust, pp.103-127.

- 8. Sinha and Zacharia. Elements of demography.
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- Guilmoto, Christophe Z. 2011. 'Demography for Anthropologists: Populations, Castes, and Classes'. In Isabelle Clark-Decès (ed.). A Companion to the Anthropology of India, Blackwell Publishing Ltd.pp. 25-41.
- 8. Heer, David M. and Grigsby, Jill S. 1992. 'Fertility', Society and Population. New Delhi: Prentice-Hall, pp. 46-61.
- 9. Jeffrey, Roger and Jeffrey, Patricia. 1997. Population, Gender and Politics: Demographic Change in Rural North India. Cambridge: Cambridge University Press, pp. 117-164.
- 10. Kaur, Ravinder. 2004. 'Across Region Marriages: Poverty, Female Migration and the Sex Ratio', Economic & Political Weekly, XXXIX (25): 2595-2603.
- 11. Malthus, Thomas Robert. 1986. An Essay on the Principle of Population. London: William Pickering, Chapters 1-2,
- 12. Visaria, P. 1976. 'Recent Trends in Indian Population Policy', Economic and Political Weekly, August, 2: 31-34.
- 13. Xaxa, Virginius. 2004. 'Women and Gender in the Study of Tribes in India', Indian Journal of Gender Studies, 11(3): 345-367.

Suggested Readings:

Government of India. 2000. National Population Policy. New Delhi (http://www.populationcommission.nic.in/facts1.htm).

- 1. Mukherjee, Radhakamal. 1934. 'On the Criterion of Optimum Population', *American Journal of Sociology*, 40(3): 344-348.
- 2. Sen, Amartya, 2003. 'Population: Delusion and Reality', Asian Affairs
- 3. Caldwell, John C. 2001. 'Demographers and the Study of Mortality: Scope, Perspectives and Theory', *Annals of the New York Academy of Sciences*, 954: 19-34.
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- 6. Bose, Ashish. (ed.). 1974. *Population in India's Development (1947-2000)*. Delhi: Vikas Publishing House.

Social Stratification

1. Introducing Stratification: Meaning and Forms

2. Theories of Stratification

- 2.1. Marx and unequal economic capacities;
- 2.2 Weber and Class, Status, Power
- 2.3 Functionalism

3. Identities and Inequalities

- 3.1. Caste, Race and Ethnicity
- 3.2. Feminism and Gendered Stratification

4. Mobility and Reproduction

- 4.1 Meaning, Forms and Nature
- 4.2 Institutionalised Practices

- 1. Beteille, Andre Inequality among Men. London: Blackwell, 1977. Chapter 1. The Two Sources of Inequality. Pp. 1-22
- 2. Bilton And Others Introductory Sociology
- Bottero, Wendy. Stratification. London: Routledge, 2005. Chapters 12 & 14 pp. 205-223 & 246-258
- 4. Bottomore, T. B. Classes in Modern Society. New York: Pantheon Books, 1966. Chapters. 2 & 3 The Nature of Social Class & Classes in Industrial Societies. 9-75
- Bourdieu Pierre 'Cultural Reproduction and Social Reproduction' In The Structure of Schooling: Readings in the Sociology of Education. Richard Arum and Irenee Beattie, Editors. NY: McGraw Hill. 1973: 56-68.
- 6. Browne Ken An Introduction to sociology
- 7. Collins Patricia Hill 'Toward a New Visio: Race Class and Gender as Categories of Analysis and Correction' Race, Sex & Class, Vol. 1, No. 1 (Fall 1993), pp. 25-45.
- 8. David Grusky. 2008. Social Stratification: Class, Race, and Gender in Sociological Perspective; Avalon Publishing.
- 9. Dipankar Gupta. 1992. Social stratification. Oxford University Press
- 10. _____ 2000.Interrogating Caste: Understanding Hierarchy and Difference in Indian Society. Penguin Books
- 11. Dipali Saha 2006. Sociology of Social Stratification; Global Vision Publishing House
- 12. Eshelman, J. R. & B. G. Cashion Sociology
- Jain, Ravindra K. 'Hierarchy, Hegemony and Dominance: Politics of Ethnicity in Uttar Pradesh, 1995' Economic and Political Weekly, Vol. 31, No. 4 (Jan. 27, 1996), pp. 215-223

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- 15. Haralambos and Heald Sociology: Themes and Perspectives
- 16. Johnson, H. M. Sociology
- 17. Kasturi DasGupta 2015.Introducing Social Stratification: The Causes and Consequences of Inequality; Lynne Rienner Publishers.
- 18. Kanhaiya Lal Sharma1994. Social Stratification and Mobility; Rawat Publications.
- 19. McLellan, David. The Thought of Karl Marx. London: Papermac, 1995. Part 2. Chapter 6. Class, pp. 182-194
- 20. Mitchell, Juliet. Woman's Estate. Harmondsworth: Penguin, 1971. Chapter 5, Position of Women 1. Pp. 99-122
- 21. Omi, Michael, and Howard Winant. Racial Formation in the United States. New York: Routledge &Kegan Paul, 1986. Chapters 1 & 4, pp. 14-24 and 57-69
- 22. Pitt-Rivers Julian 'Race Color and Class in Central America and the Andes' Daedalus, Vol. 96, No. 2, Color and Race (Spring, 1967), pp. 542-559
- 23. Sharma, K. L. Social Stratification & Mobility
- 24. Sharma, K. L. Caste Class In India.
- 25. Smelser, N. J Sociology
- 26. Tawney, R. H. Equality. London: Unwin Books, 196 32
- 27. Thio, Alex Sociology : A Brief Introduction
- 28. Tischler, H. L. Introduction to Sociology
- 29. Weber, Max, Hans Heinrich Gerth, and C. Wright Mills. From Max Weber. New York: Oxford University Press, 1946. Chapter VII, Class, Status, Party. Pp. 180 195
- 30. Worsley, Peter. Introducing Sociology.2nd ed. Harmondsworth: Penguin Books, 1970. Chapter 8, Social Stratification: Class, Status and Power, pp. 395 408

- 1. Acker, Joan. 'Women and Social Stratification: A Case of Intellectual Sexism'. American Journal of Sociology 78.4, 1973. Pp. 936-944
- Bailey F G 'Closed Social Stratification in India', European Journal of Sociology Vol. 4, No. 1 1963. pp. 107-124
- 3. Bendix Reinhard 'Inequality and d Social Structure: Comparison of Marx and Weber' American Sociological Review, Vol. 39, No. 2 (Apr., 1974), pp. 149-161
- 4. Davis, Kingsley, and Wilbert E. Moore. 'Some Principles of Stratification'. American Sociological Review 10.2 1945: pp. 242-249; 394-397
- Stinchcombe Arthur L 'Some Empirical Consequences of the Davis-Moore Theory of Stratification'. American Sociological Review 28.5 1963, pp. 805-808
- Tumin, Melvin M. 'Some Principles of Stratification: A Critical Analysis'. American Sociological Review 18.4 (\1953: 387-394
- Wrong Dennis H. 'The Functional Theory of Stratification: Some Neglected Considerations' American Sociological Review, Vol. 24, No. 6 (Dec., 1959), pp. 772-782

SEMESTER-5

Sociological Thinker I

1. Origin & development of sociology as a distinct discipline

- 1.1 Role of European Enlightenment; French, American & Industrial Revolutions
- 1.2 Contributions of Montesquieu & St. Simon
- 1.3 Auguste Comte: Positivism; Law of Three Stages

2. Karl Marx

- 2.1 Materialist Conception of History
- 2.2 Capitalist Mode of Production

3. Max Weber

- 3.1 Social Action & Ideal Types
- 3.2 Religion & Economy

4. Emile Durkheim

- 4.1 Social Fact: Suicide
- 4.2 Individual & Society: Division of Labour

- 1. Aron, Raymond. 1965. Main Currents in Sociological Thought. Vol. I & II.
- 2. Atal, Yogesh 2003. Sociology: From where to where, Jaipur: Rawat Publication.
- 3. Barnes, H.E. 1959. Introduction to the History of Sociology, Univ. of Chicago Press.
- 4. Coser, L.A., 1977. Masters of Sociological Thought, Rawat.
- 5. Fletcher, Ronald. 2000. The Making of Sociology, (Vol. I & II), Rawat.
- 6. Giddens, A. 1971. Capitalism and Modern Social Theory: An Analysis of the Writings of Marx, Durkheim and Max Weber. Cambridge: Cambridge University Press.
- 7. Hughes, John. J. Peter Martin & W.W. Sharrock. 1995. Understanding Classical Sociology-Max Weber and Durkheim. Sage.
- 8. Morrison, Ken. 1995. Marx, Durkheim, Weber: Formations of Modern Social Thought. Sage Publications.
- 9. Ritzer, G. 1996. Sociological Theory. New York: McGraw Hill Companies.
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- 11. Turner, Bryan S. 1999. Classical Sociology, Sage Publications, New Delhi.

- 1. Durkheim, E. (1951). Suicide: A Study in Sociology. New York: The Free Press.
- 2. Durkheim, E. (1958). The Rules of Sociological Method. New York: The Free Press.
- 3. Gane, Mike. (1992). The Radical Sociology of Durkheim and Mauss. London: Routledge.
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- 5. Giddens, A. 1971. Capitalism and Modern Social Theory: An Analysis of the Writings of Marx, Durkheim and Max Weber. Cambridge: Cambridge University Press.
- 6. Goodwin, Glenn A & Scimecca, Joseph A. 2006. Classical Sociological Theory-Rediscovering the Promise of Sociology. Australia: Thomson/Wadsworth.
- 7. Johnson, H.M. (1995): Sociology: A Systematic Introduction, New Delhi: Allied Publishers.
- Marx, K. and F. Engels. 1969. Selected Works Vol. 1. Moscow: Progress Publishers. pp. 13-15, 16-80, 98-106, 142-174, 502-506.
- 9. McLellan, David. 1975. Marx. London: Fontana Press.
- 10. Poggi, Gianfranco. 2006. Weber. Cambridge, UK: Polity. Pages: 1-16 (16)
- 11. Timasheff, N. S. (1967). Sociological Theory. Random House.
- 12. Weber, Max. 1947. The Theory of Social and Economic Organization. New York: The Free Press, pp. 87-123
- Weber, Max. 2002. The Protestant Ethic and the Spirit of Capitalism (translated by Stephen Kalberg). London: Blackwell Publishers, pp. 3-54, 103-126, Chapters I, II, III, IV & V.

<u>Research Methods – I</u>

1. The Logic of Social Research

- 1.1 What is Social Research
- 1.2 Objectives and Typology of Social Research.
- 1.3 Relationship between theory and research
- 1.4 Concept, Conceptualization and Operationalization, & Hypothesis
- 1.5 Objectivity and Reflexivity

2. Methodological Perspective

- 2.1 The Positivist Method
- 2.2 The Interpretative Method
- 2.3 The Humanist Method
- 2.4 Feminist Method

3. Modes of Enquiry

- 3.1 Steps of Research
- 3.2 Primary and Secondary data.
- 3.3 Method of data collection: Survey method and Observation method.
- 3.4 Tools and techniques of data collection: Questionnaire and Interview.
- 3.5 Analysing Data: Quantitative and Qualitative: an overview
- 4. **Research Project -I**: Writing a Research Proposal (Formulation of Research Problem, Rationale, Review of Literature, and Objectives of the Study)

- 1. Babbie.E. The Practice of Social Research
- 2. Baily, K.J. Methods of Social Research
- 3. Baker, T.L. Doing Social Research.
- 4. Blalock A. Introduction to Social Research.
- 5. Bryman, Alan. 2004, *Quantity and Quality in Social Research*, New York: Routledge, Chapter 2 & 3 Pp. 11-70
- 6. Goode, W. E. and P. K. Hatt. 1952. *Methods in Social Research*. New York: McGraw Hill. Chapters 5 and 6. Pp. 41-73.
- 7. Jayram, N.1989. Sociology: Methods and Theory. Madras: MacMillan, Madras
- 8. Kothari.C.R Research Methodology
- 9. Nachmias and Nachmias Research Methods in the Social Sciences
- 10. Plumer Documents of life
- 11. Punch, Keith. 1996. Introduction to Social Research, Sage, London.
- 12. Sarantakos. S Social Research

- 13. Sharma.R.K. Sociological Methods and Techniques
- 14. Shipmen, Martin. 1988The Limitations of Social Research Sage, London.
- 15. Singh K Quantitative Social Research Methods
- 16. Singleton.R.A, Straits. B.C. Approaches to Social Research
- 17. Srinivas, M.N. et al 2002(reprint), *The Fieldworker and the Field: Problems and Challenges in Sociological Investigation*, New Delhi: OUP, Introduction Pp. 1-14.
- 18. Young, P.V. 1988 Scientific Social Survey and Research Prentice Hall, New Delhi.

- 1. Beiteille, A. 2002, *Sociology: Essays on Approach and Method*, New Delhi: OUP, Chapter 4 Pp. 72-94
- 2. Durkheim, E. 1958, *The Rules of Sociological Method*, New York: The Free Press, Chapter 1, 2 & 6 Pp. 1-46, 125-140
- 3. Gluckman, M. 1978, 'Introduction', in A. L. Epstein (ed.), *The Craft of Social Anthropology*, Delhi: Hindustan Publishing Corporation, Pp. xv-xxiv
- 4. Gouldner, Alvin. 1970, *The Coming Crisis of Western Sociology*, New York: Basic Books, Chapter 13 Pp. 481-511
- Harding, Sandra 1987, "Introduction: Is there a Feminist Method?" in Sandra Harding (ed.) *Feminism & Methodology: Social Science Issues*, Bloomington: Indiana University Press, Pp. 1-14
- 6. Merton, R.K. 1972, *Social Theory & Social Structure*, Delhi: Arvind Publishing House, Chapters 4 & 5 Pp. 139-171
- 7. Mills, C. W. 1959, The Sociological Imagination, London: OUP Chapter 1 Pp. 3-24
- 8. Weber, Max. 1949, *The Methodology of the Social Sciences*, New York: The Free Press, Foreword and Chapter 2 Pp. 49-112

SEMESTER-6

Sociological Thinkers II

1. Orientation to Post Classical Theories

2. Talcott Parsons

2.1 Action Systems

3. Claude Levi-Strauss

3.1 Structuralism

4. G. H. Mead and Erving Goffman 4.1 Interactional Self and Dramaturgy

5. Peter L. Berger and Thomas Luckmann

- 5.1 Social Construction of Reality: An overview
 - 5.1.1 Society as Objective Reality: Institutionalization
 - 5.1.2 Society as Subjective Reality: Socialization

6. Max Horkheimar, T.W. Adorno and Herbert Marcuse

6.1 Frankfurt school and Critical Tradition

- 1. Ritzer George, 1996: Sociological theory (4th edition) McGraw Hill.
- 2. Bottomore, Tom. 2002, The Frunkfurt School, London: Routledge.
- 3. Turner, Jonathan. 1994. The Structure of sociological theory. Jaipur: Rawat Publications.
- 4. Coser, L. 1977, Masters of Sociological Thought, Rawat: Jaipur
- 5. Parsons, T. and E. Shils (eds). 1951. Towards a General Theory of Action. New York: Harper and Row Publishers
- 6. Horkheimar. M and Adorno. T.W. The Dialectic of Enlightenment. 2002. Stanford University Press. Stanford: California. pp 1-34. Chapter 1, The Concept of Enlightenment
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- 8. Craib, Ian. 2015. Modern Social Theory, Routledge
- 9. Wallace, A. Ruth and Wolf, Alison. 1990. Contemporary Sociological Theory. New Delhi: Prentice Hall.
- 10. Berger, P.L. 2011. Invitation to Sociology: A Humanistic Perspective, Open Road Media

- Levi Stauss, C. 1993. "Structure and Dialectics", in Structural Anthropology Volume I. Harmondsworth: Penguin, pp. 232-242
- 2. Mead, G.H. 1934 (Fourteenth Impression 1967) Mind Self and Society. Chicago: University of Chicago Press. Part III, pp 135-226
- 3. Marcuse, H. 1964. One Dimensional Man: Studies in the Ideology of Advanced Industrial Society. Boston: Boston Press, pp. 7-92
- 4. Goffman, E. 1956. The Presentation of Self in Everyday Life. Edinburgh: University of Edinburgh (Monograph No. 2)
- 5. Turner, B.S (ed.) 2013, The Social System, Routledge
- 6. Berger, P. L. and T. Luckmann. 1991. The Social Construction of Reality London: Penguin Books

<u>Research Methods – II</u>

1. Doing Social Research

- 1.1 The Process of Social Research
- 1.2 Research Design: Explanatory, Exploratory, Descriptive
- 1.3 Sampling: Definition and typology, merits and demerits.
- 1.4 Field (Issues and Context)

2. Statistical Methods

- 2.1 Levels of Measurement: Nominal, Ordinal, Interval, and Ratio. Continuous and Discrete variables. Ratio, Proportion and Percentages.
- 2.2 Frequency Distribution; Grouping of data; Cumulative frequency and percentage distribution.
- 2.3 Graphic techniques: Bar diagram; pie Chart; Frequency Polygon; Histogram; Ogive; Levels of measurement and graphic presentations.
- 2.4 Measurement of Central Tendency: Mean, Median, Mode. Comparative analysis. Skewness.
- 2.5 Measures of Dispersion: Range; Inter quartile Range; Mean Deviation; Variance and Standard Deviation.

3. Research Project –II

- 3.1 Research Design,
- 3.2 Field Work and Report Writing
- 3.3Bibliography, Citation.

- 1. Bailey, K. 1994. The Research Process in *Methods of social research*. Simon and Schuster, 4th ed. The Free Press, New York NY 10020. Pp.3-19.
- 2. Das N.G.: Statistics
- 3. Elifson, Kirk W., Richard P. Runyon, and Audrey Haber. Fundamentals of social statistics. McGraw-Hill Humanities, Social Sciences & World Languages, 1990.
- 4. Garett.H.E. Statistics in Psychology and education
- 5. Goon, A.M., M.K. Gupta and B. Dasgupta-) Basic Statistics, Kolkata World Press Pvt. Ltd, 1978 Blalock : Social Statistics
- 6. Gupta, Akhil and James Ferguson. 1997. *Anthropological Locations*. Berkeley: University of California Press. Pp.1-46.
- 7. Gupta, S. P. 2007. Elementary Statistical Methods. Sultan Chand & Sons.
- 8. Irvine, John, Ian Miles, and Jeff Evans, (Eds). Demystifying social statistics. London: Pluto Press, 1979.
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SECTION-II ELECTVE COURSES

SKILL ENHANCEMENT COURSE

(2 Credits each)

SEMESTER-3&4

Group-A

SEC-A (1)

Reading, Writing and Interpretation in Sociology

Purposes for reading: People read different kinds of text (e.g., scholarly articles, textbooks, reviews) for different reasons. Some purposes for reading might be # for specific information; # to get an overview of the text; # to relate new content to existing knowledge; # to write something (often depends on a prompt); # to critique an argument; # to learn something; # for general comprehension

1. Introduction: The virtues of repetition

Textual reading and writing: A text until some provisional goal is achieved.

- **1.1 Assignment, Day 1:** Read a short (1-2 page) academic text and summarize it in one paragraph (3-4 sentences). (This is without prior guidance by the instructor).
- **1.2 Assignment, Day 2:** Re-read the same text and re-write the summary after a brief discussion of CONTENT (does the summary contain most of the most important points made in the text?)
- **1.3 Assignment, Day 3:** Re-read the same text and re-write the summary again after a brief discussion of FORM (is the summary well structured, clear and effective?)

2. Techniques for reading

2.1 Grasping the whole: Overview

2.2 Divide and conquer: Taking texts apart

- 2.2.1 Titles as the shortest summary of a text
- 2.2.2 Introductions and Conclusions
- 2.2.3 Identifying important passages and sentences
- 2.2.4 Everything is not equally important: Distribution of emphasis
- 2.2.5. Isolating words & terms: Dictionaries, Encyclopaedias
- 2.2.6 Contextualizing texts and asking for help from teachers/tutors

3. Techniques for writing

3.1 Building a structure: What do you want to say?

- 3.1.1 Beginning, middle and conclusion stages of argument
- 3.1.2Working with blocks: Sections, Paragraphs, Sentences
- 3.1.3Sections and Paragraphs as key building blocks of academic prose

3.1.4 Sentences and punctuation; length, balance, continuity

3.2 Borrowing material: Paraphrasing, Quoting, Citing

- 3.2.1 Plagiarism
- 3.2.2 Quotations: When? Why? How?
- 3.2.3 Citation styles

4 Interpretations:

Peer Reviewing: Students will practice evaluating each other's work throughout the semester, but the last week can be formalized and stepped up into a more elaborate exercise.

4.1 Assignment, Day 1: The whole class does an individualized, two-part composite reading and writing exercise designed by the instructor based on semester long experience of student abilities and interests.

4.2 Assignment, Day 2: The reading part of the individual assignment will be randomly distributed for students to evaluate and comment on their colleagues' work. The instructor moderates discussion of strengths and weaknesses, highlighting techniques for recognizing quality (or its lack).

4.3 Assignment, Day 3: The writing part of the assignment will similarly distributed and evaluated through interactive, moderated discussion.

Readings:

Examples could include:

- 1. Keynes, John Maynard 1936.*The general theory of employment, interest and money*, Palgrave Macmillan, United Kingdom
- 2. Parsons, Talcott 1951. The social system, Glencoe III, Free Press
- 3. Douglas, Mary 1986. *How institutions think*, Syracuse University Press, Syracuse, New York.
- 4. Romila Thapar 2004. Somanatha: The many voices of history, Penguin Books, India
- 5. Sunil Khilnani 1997. The idea of India, Penguin Books.
- 6. Louis Dumont 1980. Homo Hierarchicus, University of Chicago Press.
- 7. Well-known guides to academic writing (such as Howard Becker's *Writing for Social Scientists*) will also be used where appropriate..

Group-A

SEC-A(2)

Gender Sensitization

1. What is Gender?

- 1.1 Gender as a category
- 1.2 Gender, Sex and sexuality
- 1.3 Masculinity and Femininity
- 1.4 Private and public dichotomy
- 1.5 Gender stereotypes

2. Gender Construction

2.1 Beyond the gender binary2.2Ideas and Discrimination on LGBT

3. Gender Practices and Policies

- 3.1 Gender Inequality
 - 31.1 Female Infanticide and Child Marriage
 - 3.1.2 Pocso Act: Overview and Awareness
 - 31.3 Eve teasing, Rape, Domestic violence
- 3.2 Gender and Workplace Harassment
 - 3.2.1 Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ("POSH Act")
 - 3.2.2 Vishakha judgment and Current situation

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- 22. Mamta Mahrotra. Gender Inequality in India. Prabhat Publications.
- 23. Menon, Nivedita (ed.).1999. Gender and Politics in India. New Delhi: Oxford University Press.
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Group-B

SEC-B (1)

Statistical Reasoning for Sociology

- 1. Use of statistics in Social Research: Descriptive and Inferential Statistics
- 2. Basic Concepts: Statistics, population, parameter, statistics, Sample, variable
- **3.** Sampling types and applications
- 4. Frequency Distribution and Graphical Techniques
- 5. Coding and Tabulation
- 6. Central tendency -- Mean, Median, Mode
- 7. Dispersion --- Range, variance, Standard Deviation

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- 6. Irvine, John, Ian Miles, and Jeff Evans, (Eds). Demystifying social statistics. London: Pluto Press, 1979.
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Group-B

SEC-B (2)

Theory & Practice of Development

1. What is development?

2. Recent trends in Development and Post development

- 2.1 Social development indicators
- 2.2 Sustainable development
- 2.3 Growth-Development Debate
- 2.4 Private–Public Partnership-PPP

3. Social services & development

- 3.1 Concept of social service
- 3.2 Social services for socialization and development
- 3.3 Participatory development: Gender and Development GAD; Civil society& grassroots initiatives: SHG; NGO
- 3.4 Corporate Social Responsibility CSR

4. Human Development: Growth vs. Development

- 4.1 Development with dignity
- 4.2 Decentralisation of development: Panchayat & Municipality
- 4.3 MGNREGA
- 4.4 Digital India

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DISCIPLINE SPECIFIC ELECTIVE

SEMESTER-5 & 6

Group A

DSE-A-(1) Urban Sociology

1. Introducing Urban Sociology

- 1.1 Emergence, Development and Importance of Urban Sociology
- 1.2 Rural-urban continuum: An Overview
- 1.3 Urban, Urbanism and Urbanity
- 1.4 Urbanization processes and patterns

2. Perspectives in Urban Sociology

- 2.1. Ecological
- 2.2. Political Economy
- 2.3. Network
- 2.4 City as Culture

3. Movements and Settlementswith reference to India

- 3.1. Migration: Meaning, Types, Factors
- 3.2 Types of Urban Settlements: City and its types
- 3.3 Trends of Settlement and its Implications: Smart Cities

4. Urban Space: Problems with reference to India

- 4.1 Housing and Slum
- 4.2 Poverty
- 4.3 Crime and juvenile delinquency
- 4.4 Beggary

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Group A

DSE- A- (2)

Sociology of Work and Industry

1. Interlinking Work and Industry

- 1.1 Concept of work and occupation
- 1.2 Work in industrial society

2. Forms of Industrial Culture and Organisation

- 2.1 Industrialism
- 2.2 Post-industrial Society
- 2.3 Information Society

3. Dimensions of Work

- 3.1 Alienation: Causes and Consequence
- 3.2 Gender: Women and Industry, Gender Discrimination in Work
- 3.3 Nature of Unpaid Work and Forced Labour

4. Work in the Informal Sector

4.1 Definition, Informal sector in Developing countries4.2Women's Work and the Informal sector

5. Risk, Hazard and Disaster

- 5.1 Nature and Types of Industrial Risk, Hazard and Disaster
- 5.2 Dimensions and Trends of Vulnerability and Exposure

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Group A

DSE-A (3)

Environmental Sociology

1. Envisioning Environmental Sociology

- 1.1. Environmental Sociology: Origin, New Directions
- 1.2. Realist-Constructionist Debate
- 1.3 Development, Displacement and Rehabilitation: Major Issues

2. Approaches

- 2.1 Human Ecology New Environmental Paradigm
- 2.2 Treadmill of Production
- 2.3 Ecological Modernization
- 2.4 Ecofeminism
- 2.5 Political Ecology and Ecological Marxism
- 2.6 Convergence of Different Approaches: Sustainable Development

3. Environmental Movements in India

- 3.1Chipko
- 3.2 Narmada
- 3.3 Silent Valley Movement

4. Global Issues

- 4.1 Global Environmental Politics: Major Issues
- 4.2 Climate Change: Major Issues

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Group A

DSE-A-(4)

Agrarian Sociology

1. Agrarian Societies and Agrarian Studiesin India

1.1 Village community: Features and Types

1.2 Rural social structure

1.3 Village studies: An overview

2. Key Issues in Agrarian Sociologyin India

2.1 Land Reforms and tenancy reforms

- 2.1 Rural poverty in India: conditions and problems of the agricultural labourers
- 2.3 Agrarian unrest and farmers movements

3. Themes in Agrarian Sociology of India

- 3.1 Labour and agrarian class structure
- 3.2 Caste, Gender and Agrarian realities
- 3.3 Green revolution and its impact on agriculture

4. Agrarian Futuresof India

4.1Rural society in transition: Nature, and Dimensions

- 4.1.1 Agents of change: Corporate Initiatives in Agriculture and Its Implications
- 4.2 Rural development in India: An overview
- 4.3 Agrarian crisis

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Group B

DSE- B (1)

Indian Sociological Traditions

1. G S Ghurye

1.1 Caste and Race1.2 City and Civilization

2. Radhakamal Mukerjee

2.1 Personality, Society, Values2.2 Social Ecology

3. D P Mukerji

3.1 Tradition and Modernity3.2 Middle Class

4. Verrier Elwin 4.1. Tribes in India

5. M.N. Srinivas 5.1. Social Change

6. Irawati Karve

6.1. Gender and Kinship

7. Leela Dube(

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Group B

DSE- B (2)

Sociology of Visual Culture and Media

1. Introduction

- 1.1 Introducing Visual Cultures and the Process of 'Seeing'
- 1.2 The Spectacles of Modernity
- 1.3 Media practices in diversities

2. Visual Environments and Representations

- 2.1 Power and gaze of the State
- 2.2 Visual Practices and Identity formation
- 2.4 Visual Cultures of Everyday Life

3. Sociology of Media

- 3.1 Theories of Media
- 3.2 Media Representation Old & New
- 3.3 Media & Globalization
- 3.4 Globalizing Media
- 3.5 Role of Internet
- 3.6. Impact of Media on Human Behaviour

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Group B

DSE- B (3)

Sociology of Health and Medicine

1. Introduction to the Sociology of Health and Medicine

1.1 Origin and development.

- 1.2 Conceptualizing Health, Disease, and Illness.
- 1.3 Social and Cultural dimensions of illness and medicine.
- 1.4 Medicine as an Institution, Medical Ethics.

2. Theoretical Orientation in Health and Illness

- 2.1 Social Approaches
- 2.2 Cultural Approaches
- 2.3 Discourse and Power
- 2.4 Feminist Approach

3. Negotiating Health and Illness

- 3.1 Medical practices: Health Care System, Health as an Industry
- 3.2 Public Health: Prevention and awareness of health problems
- 3.3 Health policy in India

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- 8. Fruend, Peter E.S., McGuire, Meredith B. and Podthurst, Linda S. (2003) *Health, Illness and the Social Body*, New Jersey: Prentice Hall. Chapter 9 (Pages 195-223)
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- 10. Gould, Harold A. (I965) Modern Medicine and Folk Cognition in Rural India in *Human Organization*, No. 24. pp. 201- 208.
- 11. Inhorn, Marcia (2000). Defining Women's health: Lessons from a Dozen Ethnographies, *Medical Anthropology Quarterly*, Vol. 20(3): 345-378.
- 12. Kleinman, Arthur (1988) The Illness Narratives: Suffering, Healing and the Human Condition. New York : Basic Books Inc. Publishers. Chapter 1. (Pages 3-30).
- 13. Leslie, Charles (1976) Asian Medical Systems: A Comparative Study, London: University of California Press, Introduction. (Pages 1-12).
- Morgan, Lynn. Morgan (1987) Dependency Theory and the Political Economy of Health: An Anthropological Critique. Medical Anthropology Quarterly, New Series, Vol.1, No.2 (June, 1987) pp. 131-154.
- 15. Nichter, Mark and Mimi Nichter (1996) Popular Perceptions of Medicine: A South Indian Case Study. In Anthropology and InternationalHealth. Amsterdam: OPA. Chapter7 (Pages 203-237)
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- 18. Talcott Parsons (1951) The Social System, London: Routledge & Kegan Paul Ltd. Chapter 10, (Pages 428-479).
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Group B

DSE- B (4)

PROJECT: FIELDWORK AND DISSERTATION

Dissertation may be written by using any method as prescribed in the syllabus. Size of the dissertation should be around 5000 words. Dissertation paper will be examined jointly by one Internal and one External Examiner to be appointed by the University. Marks will be awarded jointly by the Internal and External Examiners on the basis of the Fieldwork, Written Dissertation and Viva-voce.



B.A.(General Program)

SYLL&BUS

Under Choice Based Credit System (CBCS)

UNIVERSITY OF CALCUTTA 2018

Note:

- ***** Attendance: 10 marks per paper
- ✤ Internal Assessment: 10 marks per paper
- Core Courses, Discipline Specific Elective and Generic Elective Courses: (TU+Th=15+65) = (1+5 credits each) = 6 Credits each
- Skill Enhancement Courses: (Th=2 credits each) =2 Credits each

Course Distribution:

- Core Courses:8: 6 Credits each
 - 2 Courses each in Semesters 1, 2, 3 and 4 covering two subjects

LCC: 4 : 6 Credits each (2 courses each from LCC(1) & LCC(2))

- Elective Courses:
 - i. Discipline Specific Elective DSE:4: 6 Credits each
 - 2Courses in each Semesters 5 and 6, of 2 subjects,

(Group-A& B for specified semester)

- ii. Skill Enhancement Elective: 4 : 2 credits each
 - 2 Courses each in Semesters 3and 5 from Group-A of 2 subjects
 - 2 Courses each in Semesters 4and 6 from Group-Bof 2 subjects
- iii. Generic Elective: 2 : 6 Credits each
 - 1 Course each in Semesters 1 and 2 from one subject different from Core Subjects including LCC

Important Note:

- UGC Model Syllabus for Sociology has been followed while framing the Syllabus Below. Reference:https://www.ugc.ac.in/pdfnews/1196038_BA_Sociology.pdf
- The Readings provided below include many of those of the UGC Model CBCS Syllabus in Sociology.
- ✤ The format is subject to the common structural CBCS format of the University.

Suggested Mode for 15 Marks Tutorial Segment:

- <u>Written Mode:</u> 15 marks written evaluation by college CT (Class test) -(7th/8th week of the semester); Upto1000/1200 words Term papers- (1/2@ 500/600 Words each)
- <u>Presentation Mode</u>: Paper or Report Presentation/ writing on Syllabus based topics or Current topics.

[All modes/ themes/ topic of the tutorial related segments to be decided by concerned faculty of respective colleges.]

LIST OF COURSES - GENERAL PROGRAM								
CORE COURSES/GENERIC ELECTIVE (4 Courses)								
Subject-Gen-Core/Generic-Semester-Paper-Th &TU		(6 Credits per Course) 4x6=24 Credits						
SOC-G-CC/GE-1-1-TH&TU		Introduction to Sociology						
SOC-G-CC/GE-2-2-TH&TU		Sociology of India						
SOC-G-CC/GE-3-3-TH&TU		Sociological Theories						
SOC-G-CC/GE-4-4-TH&TU		Methods of Sociological Enquiry						
Skill Enhancement Course (2 Credits per Course)								
4 courses in 4 semesters from 2 subjects								
GROUP-A: 2Courses each in Semesters3/5 from Group-A of 2 subjects								
SOC-G-SEC-X-A(1)-TH Techniq		ues of Social Research						
SOC-G-SEC-X-A (2)-TH Gender		Sensitization						
GROUP-B:2Courses each in Semesters 4/ 6 from Group-B of 2 subjects								
SOC-G-SEC-X-B(1)-TH	and Practice of Development							
SOC-G-SEC-X-B(2)-TH	tions of Statistics for Sociology							
DISCIPLINE SPECIFIC ELECTIVE								
(6 Credits per Course)								
GROUP-A 2 Courses in Semesters 5 from 2 subjects								
SOC-G-DSE- 5 -A(1)-TH&TU		Religion and Society						
SOC-G-DSE- 5 -A(2)-TH&TU		Family Marriage Kinship						
GROUP-B 2 Courses in Semesters 6from 2 subjects								
SOC-G-DSE-6-B(1)-TH&TU		Social Stratification						
SOC-G-DSE-6-B(2)-TH&TU		Gender and Sexuality						

Course Structure for B.A. (General)

Course Components	B.A. General				
Core Course (CC)	8**				
Language Core Course (LCC)	4				
Generic Elective (GE)	2				
Discipline Specific Elective (DSE)	4**				
Ability Enhancement Compulsory Course (AECC)	2				
Skill Enhancement Elective Course (SEC)	4**				
Total no. of courses	24				
**Covering two subjects					

Semester wise Courses forB. A. (General):

		Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6
	Core Course (CC)	2Th+2TU	2Th+2TU	2Th+2TU	2Th+2TU		
		CC-1	CC-2	CC-3	CC-4		
	Language(LCC)			1Th+1TU	1Th+1TU	1Th+1TU	1Th+1TU
				L1(1)	L2(1)	L1(2)	L2(2)
Elective Courses:							
i)	Generic Elective (GE)	1Th+1TU	1Th+1TU				
		GE-1	GE-2				
ii)Discipline Specific					2Th+2TU	2Th+2TU
Elective (DSE)						DSE-A	DSE-B
						(1A+2A)	(1B+2B)
Ability Enhancement		1Th+0P/TU	1Th+0P/TU				
Compulsory Course		AECC-1	AECC-2				
(.	AECC)						
S	kill Enhancement			1Th+0TU	1Th+0TU	1Th+0TU	1Th+0TU
E	Clective (SEC)			SEC-A(1)	SEC-B(1)	SEC-A(2)	SEC-B(2)
Total No. of Courses 4 x		4 x	4 x 100	4 x 100	4 x 100	4 x 100	4 x 100
a	nd Marks	100=400	=400	=400	=400	=400	=400
	Total Credits	20	20	20	20	20	20

Th= Theory TU= Tutorial

- CC/LCC/GE/DSE: Each Theory and Practical Course have 4 and 2 Credits respectively/ Each Theory and Tutorial Course have 5 and 1 Credit(s) respectively
- CC: 4 courses each from 2 disciplines(one course from each subject under each semester)
- ✤ LCC: L1-English courses; L2=MIL courses; two courses each
- ✤ GE: Two courses from one subject different from core subject
- ✤ DSE: 2 courses each from 2 disciplines
- ✤ AECC/SEC : Each Course has 2 Credits
- ✤ AECC-1: Communicative English/MIL,AECC-2: Environmental Studies
- SEC: 2 courses from two subjects
- ✤ DSE/SEC: Choice must be group specific to each semester

Semester-1

CC/GE-1 Introduction to Sociology

1. Sociology: Discipline and Perspective

1.1Nature and Scope of Sociology

1.2 Sociology as a science

1.3 Sociology and Common Sense

2. Sociology and Other Social Sciences

2.1 Sociology and Social Anthropology

2.2 Sociology &Psychology

2.3 Sociology & History

3. Basic Concepts

3.1 Individual and Group

3.2 Associations and Institutions

3.3 Culture and Society

3.4 Social Change

- 1. A. Beteille : Sociology—Essays on Approach and Method (OUP)
- 2. Alex Inkeles: What Is Sociology?
- 3. Alex Thio: Sociology
- 4. Andre, Beteille, 2009, *Sociology: Essays in Approach and Method*, Delhi: Oxford University Press, Chapter 1, 'Sociology and Common Sense', Pp. 13-27
- 5. Anthony Giddens : Sociology
- 6. G. Rocher: A General Introduction to Sociology
- 7. George Ritzer : Encyclopaedia of sociology
- 8. Gilles Ferreol& Jean-Pierre Noreck: An Introduction to Sociology(PHI Learning)
- 9. Gordon Marshal : Dictionary of Sociology (OUP)
- 10. Harry M. Johnson : Sociology
- 11. Henry Tischler: Introduction to Sociology
- 12. J Ross Eshleman & B.G. Cashion: Sociology an Introduction
- 13. M. Haralambas&R. M. Heald: Sociology Themes and Perspectives.
- 14. P. Worsely: New Introducing Sociology
- 15. T. Bottomore : Sociology—A Guide to Problems and Literature

- 1. Béteille, André, 1985, *Six Essays in Comparative Sociology*, New Delhi: Oxford University Press, Chapter 1, 'Sociology and Social Anthropology', Pp. 1-20
- 2. Beteille, André, 2002, *Sociology: Essays in Approach & Method*, Oxford University Press, Chapter 2, 'Sociology and Social Anthropology', Pp. 28-54
- 3. Beattie, J., 1966, *Other Cultures*, London R.K.P., Chapter 2, 'Social Anthropology and Some Other Sciences of Man', Pp. 25-29
- 4. Burke, Peter, 1980, *Sociology and History*, George Allen and Unwin, Chapter 1, 'Sociologists and Historians', Pp. 13-30
- 5. Bottomore, T. B. 1971, *Sociology: A Guide to Problems and Literature*, London: Allen and Unwin. Chapter 4, 'The Social Sciences, History and Philosophy', Pp. 65-80
- Bierstedt, Robert, 1974, *The Social Order*, New York: McGraw Hill Book Company Part 3, Chapter 5, 'The Meaning of Culture', p. 125-151, Chapter 6, 'The Content of Culture' Pp. 152-187, Chapter 7, 'The Acquisition of Culture', Pp. 188-212.
- 7. Bierstedt, Robert 1974, *The Social Order*, McGraw Hill, Chapter 20, 'The Problem of Social Change' Pp. 527-567
- 8. Firth, Raymond, 1956, *Human Types*, Thomas Nelson & Sons, Chapter 3, Work and Wealth of Primitive Communities', Pp. 71-97
- 9. Garner, James Finn, 1994, *Politically Correct Bedtime Stories: Modern Tales for Our Life and Times*, New Jersey: John Wiley & Sons Inc., Chapters, 'Little Red Riding Hood' & 'Rumpelstiltskin'.
- 10. Horton, Paul B., Chester L. Hunt. 2004, *Sociology*. New Delhi: Tata McGraw Hill. Chapter 9, Pp. 210- 229
- 11. MacIver, Robert M, and Charles Hunt Page. 1949. *Society*, New York: Rinehart. Chapter 10, 'Types of Social Groups', Pp. 213-237
- Redfield, Robert 1956, Chapter 16, 'How Human Society Operates', in Harry L Shapiro (ed.) *Man, Culture and Society*. New York: Oxford University Press, Pp.345-368
- Ritzer, George, 2004, The *McDonaldisation of Society*, Pine Forge Press, Chapter 1, 'An Introduction to McDonaldisation', Pp. 1-20, Chapter 2, McDonaldisation and Its Precursors' Pp. 21-39, Chapter 9, 'McDonaldisation In a Changing World', Pp. 167-199
- 14. Ritzer, George, 1996, *Classical Sociological Theory*, New York: McGrawHill, Chapter 1, 'A Historical Sketch of Sociological Theory- The Early Years', Pp. 13-46

Semester-2

CC/GE-2 Sociology of India

1. India as a Plural Society

1.1 Unity and Diversity

1.2 Problem of National Unity

2. Social Institutions and Practices

2.1 Caste

2.1.1 Sanskritization

2.1.2 Changing aspects

2.2 Tribe

2.2.1 Features

2.2.2 Tribes in contemporary India

2.3 Class

2.3.1 Rural class

2.3.2 Urban class

2.4 Village

2.4.1 Self-sufficient village community

2.5 Family and Kinship

2.5.1 Types of family

2.5.2 Kinship in India

3. Identities and Change

3.1 Dalits' Movement

3.2 Women's Movement

4. Challenges to State and Society
4.1Communalism
4.1.1 Problems
4.1.2 Solution
4.2 Secularism
4.2.1 Concept
4.2.2 Nature

- A. R. Desai, Social Background of Indian Nationalism (6Th-Edn): Popular Prakashan, 2005
- 2. AniruddhaChoudhury. 2016. "BharaterSamajPrasange" Chatterjee Publishers.
- 3. B Kuppuswamy, Social Change in India: Vikas Publications, 1972

- 4. Biswajit Ghosh (Ed), Development and Civil Society: Rawat, 2012
- 5. Ganguly&Moinuddin, SamakalinBharatiyaSamaj: PHI Learning 2008 (in Bengali)
- 6. Gerald James Larson, India's Agony over Religion: Suny Press, 1995
- Giri Raj Gupta. Family and Social Change in Modern India:, Vikas Publishing House, 1976
- 8. N.Jayaram, On Civil Society: Issues and Perspectives: Sage, 2005
- 9. NeeraChandhoke& Praveen Priyadarshi, Contemporary India: Economy, Society, Politics: Pearson Education India, 2009
- 10. Patricia Uberoi, Family, Kinship and Marriage in India: OUP India, 1994
- 11. Rajendra K Sharma, Indian Society: Institutions and Change: Atlantic Publishers &Dist, 2004
- 12. Shah, Ghanshyam. Dalit i d e n t i t y a n d p o l i t i c s. Delhi: Sage 2001
- 13. T. N. Madan, Religion in India: OUP India, 1992
- 14. Veena Das, Handbook of Indian Sociology: OUP India, 2006

- Alavi, Hamaza and John Harriss (eds.) 1989. Sociology of 'Developing Societies': South Asia.London: Macmillan. John Harriss, "The Formation of Indian society: Ideology and Power". 126 –133.
- 2. Deshpande, Satish, 2003, *Contemporary India : A Sociological View*.New Delhi; Viking, pp. 125-150.
- 3. Dumont, L. 1997, Religion, Politics and History in India. Paris: Mouton, Chapter 5
- Haimendorf, C.V.F., 1967, "The Position of Tribal Population in India", in Philip Mason (ed.), *India and Ceylon: Unity and Diversity*, New York: Oxford University Press, Chap9.
- 5. Karve, Iravati. 1994, "The Kinship map of India", in Patricia Uberoi(ed.) *Family, kinship and marriage in India*. Delhi: Oxford University Press, pp.50-73.
- Kumar, Radha. 1999, "From Chipko to sati: The Contemporary womens "movement", in NiveditaMenon (ed.) *Gender and Politics in India*. Delhi: Oxford University Press, pp. 342-369.
- 7. Madan, T.N., 1997, *Modern Myths and Locked Minds*. Delhi: Oxford University Press, Chap 8.
- Mason, Philip 1967. "Unity and Diversity: An Introductory Review" in Philip Mason(ed.) India and Ceylon: Unity and Diversity. London: Oxford University Press, Introduction
- 9. Shah, A. M., 1998, The Family in India: Critical Essays. Orient Longman, 52-63.
- 10. Shah, Ghanshyam. 2001, Dalit identity and politics. Delhi: Sage, Chap1 and 7.
- 11. Srinivas, M.N., 1956, "A Note on Sanskritization and Westernization", *The Far Eastern Quarterly*, Volume 15, No. 4, pp 481-496.
- 12. Srinivas, M.N., 1969, "The Caste System in India", in A. Beteille (ed.) *Social Inequality: Selected Readings*. Harmondsworth: Penguin Books, pp.265-272.

- 13. Srinivas, M.N., 1987, *The Dominant Caste and Other Essays*, Delhi: Oxford University Press, pp.20-59.
- 14. Stern, Robert W. 2003. *Changing India*. Cambridge: CUP. Introduction. Change, societies of India and Indian Society. pp. 1 31.
- 15. Thorner, Daniel, 1992." Agrarian Structure" in Dipankar Gupta (ed.), *Social Stratification in India*, New Delhi: Oxford University Press, pp. 261-270.
Semester-3

CC/GE-3 Sociological Theories

1. Emergence of sociology as a new discipline: A brief account

2. Karl Marx

- 2.1 Materialist Conception of History
- 2.2 Class and Class Struggle

3. Emile Durkheim

- 3.1 Social Fact
- 3.2 Forms of Solidarity

4. Max Weber

- 4.1 Ideal Types and Social Action
- 4.2 Types of Authority

- 1. Alan Swingewood. A Short History of Sociological Thought; PHI Learning, 1991
- 2. Aron, Ramond. 1967(1982 reprint). Main currents in sociological thoughts (2volumes). Harmondsworth, Middlesex: Penguin Books.
- 3. H.E. Barnes. Introduction to History of Sociology
- 4. Coser, Lewis A. 1979. Masters of Sociological Thought. Rawat: Jaipur
- 5. Ernest Fischer. How to Read Karl Marx, Aakar: New Delhi 2008
- 6. Fletcher, Ronald. 1994. The Making of Sociology (2 volumes) Jaipur-Rawat.
- 7. Maurice Cornforth. DwandamulokBastubad(tr. Into Bengali by BholanathBandyopadhyay)
- 8. Morrison, Ken.1995 Marx, Durkheim, Weber: Formation of Modern Social Thought. London; sage.
- 9. Santanu Ghosh. SamajtatwikChintadhara
- 10. Ramanuj Ganguly, 2nd Ed Tatwo O ChintadarsheSamokalinSamajtatwa:, Reena Books: Kolkata 2013 (in Bengali)
- 11. Ritzer, George. 1996. Sociological Theory. New Delhi. Tata-McGraw Hill.
- 12. The Communist Manifesto (21 February 1848), Karl Marx & Friedrich Engels, Echo Library, 2009

Semester-4

CC/GE-4 Methods of Sociological Enquiry

1. The Logic of Social Research

1.1 Concepts; Variables; Propositions

- 1.2 Conceptualization and Operationalization
- 1.3Formulation and Verification of Hypotheses
- 1.4 Research Design: Exploratory, Explanatory, Descriptive
- 1.5 Sampling logic: Probability and Non-probability

2. Methodological Perspectives

- 2.1 The Positivist Method
- 2.2 The Interpretative Method
- 2.3 The Comparative Method
- 2.4 The Ethnographic Method

3. Modes of Enquiry

- 3.1 Theory and Research
- 3.2 Quantitative & Qualitative: Survey & Experimental Research; Qualitative Field Research & Unobtrusive Research-Types, Tools & Techniques
- 3.3 Analysis & Interpretation of data: Quantitative & Qualitative

- 1. Babbie, Earl. 2010. The practice of social research. California: Wadsworth Cengage Learning.
- 2. Bajaj and Gupta. 1972 Elements of Statistics. New Delhi: R.Chand and Co., New Delhi.
- 3. Beteille, A. and Madan, T.N. 1975 Encounter and experience: Personal Accounts of Fieldwork. Vikas Publishing House, New Delhi.
- 4. Bryman, Alan. 2012. Social research methods (4thed). Oxford University Press.
- 5. Bryman, Alan. 1988 Quality and Quantity in Social Research Unwin Hyman, London
- 6. Bryman, Alan. 2004, Quantity and Quality in Social Research, New York: Routledge.
- 7. Chattopadhyay, Krishnadas& Sen, Sudarshana. (2013). Rudiments of social research. Kolkata: Levant Books.
- 8. Creswell, John. 2014. Research Design: Qualitative, Quantitative & Mixed method approaches (4thed.). Sage publications.
- 9. Jayram, N.1989. Sociology: Methods and Theory. Madras: MacMillan, Madras
- 10. Kothari, C.R. Research Methodology: Methods and Techniques, Bangalore, Wiley Eastern.
- 11. Nachmias, David. &Nachmias, Chava. 1981. Research methods in the social sciences. New York: St. Martin's Press.
- 12. Punch, Keith. 1996. Introduction to Social Research, Sage, London.

- 13. Ranjit Kumar. 2011. Research Methodology: A step-by-step guide for beginners. Sage Publications.
- 14. Shipmen, Martin. 1988The Limitations of Social Research Sage, London.
- 15. Young, P.V. 1988 Scientific Social Survey and Research Prentice Hall, New Delhi.

- 1. Ahuja, Ram. 2011. Research methods. Rawat publications.
- 2. Béteille, A. 2002, Sociology: Essays on Approach and Method, New Delhi: Oxford University Press, Chapter 4, pp. 72-94.
- 3. Durkheim, E. 1958, The Rules of Sociological Method, New York: The Free Press.
- Geertz, Clifford. 1973. Interpretation of Cultures, New York: Basic Books. Chapter 1, pp. 3-30; Chapter 1& 2, pp. 1-46.
- 5. Gluckman, M. 1978, 'Introduction', in A. L. Epstein (ed.), The Craft of Social Anthropology, Delhi: Hindustan Publishing Corporation, pp. xv-xxiv.
- 6. Goode, W.J. and P. K. Hatt. *Methods in Social Research* (Indian reprint). New Delhi: Surjeet Publisher, 2006.
- 7. Guthire, G. Basic Research Methods: An Entry to Social Science research. New Delhi: Sage, 2010.
- 8. May, Tim. 2001. Social Research: Issues, methods & process. Philadelphia: Open University Press.
- 9. McTavish, Don. G. &Loether, Herman J. 2015. Social research: An evolving process. Noida: Pearson India Education Services Pvt. Ltd.
- 10. Merton, R. K. 1972, Social Theory and Social Structure, Delhi: Arvind Publishing House.
- 11. Mills, C. W. 1959, The Sociological Imagination, London: Oxford University Press, Chapter 1, pp. 3-24.
- 12. Neuman, Lawrence. 2014. Social Research Methods: Qualitative and Quantitative Approaches (7thed). Pearson Education Limited.
- 13. Radcliffe-Brown, A. R. 1958, Methods in Social Anthropology, Delhi: Asia Publishing Corporation, Chapter 5, pp. 91-108.
- 14. Srinivas, M.N. et. al. 2002(reprint), The Fieldworker and the Field: Problems and Challenges in Sociological Investigation, New Delhi: OUP, Introduction, pp. 1-14.
- 15. Weber, Max. 1949, The Methodology of the Social Sciences, New York: The Free Press, Foreword, pp. iii- x.

Skill Enhancement Course

(2 Credits per Course)

Semesters 3,4, 5 and 6

SEC-A : Semester 3/5

SEC-B : Semester 4/6

SEC-A-(1)

Techniques of Social Research

1. Research Design

- 1.1 Formulation of a research problem
- 1.2 Framing research questions

2. Data Collection

- 2.1 Secondary sources: Reading & Reviewing appropriate literature
- 2.2 Sampling frameworks; Probability & Non-Probability
- 2.3 Primary sources: Methods of data collection; Questionnaire; Interview; preparation & framing; limitations

3. Data Analysis

- 3.1 Data Recording, Coding, Processing and interpretation
- 3.2 Content analysis
- 3.3 Case Study Method

4. Project Report Writing

- 4.1 Writing social research report; some basic considerations
- 4.2 Organization of the report
- 4.3 Reference & Bibliography

Readings:

- 1. Babbie, Earl. 2010. The practice of social research. California: Wadsworth Cengage Learning.
- 2. Baker, Therese, L. 1994. Doing Social Research (2nd edition). New York: McGraw-Hill, Inc. Britt, Steuart Henderson. 1971. The Writing of Readable Research Reports. Journal of Marketing Research 8, no.
- 3. Bryman, Alan. 2012. Social research methods (4thed). Oxford University Press.
- 4. Ranjit Kumar. 2011. Research Methodology: A step-by-step guide for beginners. Sage Publications.

- 1. Ahuja, Ram. 2011. Research methods. Rawat publications.
- 2. Amir B. Marvasti, 2004, Qualitative Research in Sociology, London: Sage.
- 3. Béteille, A. 2002, Sociology: Essays on Approach and Method, New Delhi: Oxford University Press, Chapter 4, pp. 72-94.
- 4. Booth, P.F. 1991. Report Writing, Huntingdon: Elm Publications.
- 5. Bryman, Alan. 2004, Quantity and Quality in Social Research, New York: Routledge, Chapter 2 & 3, pp. 11-70.
- 6. Chattopadhyay,Krishnadas& Sen, Sudarshana. 2013. Rudiments of social research. Kolkata: Levant Books.
- 7. Creswell, John. 2014. Research Design: Qualitative, Quantitative & Mixed method approaches (4thed.). Sage publications.
- 8. Gluckman, M. 1978, 'Introduction', in A. L. Epstein (ed.), The Craft of Social Anthropology, Delhi: Hindustan Publishing Corporation, pp. xv-xxiv.
- Geertz, Clifford. 1973. Interpretation of Cultures, New York: Basic Books. Chapter 1, pp. 3-30.
- 10. Lofland J. and Lofland L. 1984, Analysing Social Settings: A Guide to Qualitative Observation and Experiment, California: Wadsworth
- 11. Mills, C. W. 1959, The Sociological Imagination, London: Oxford University Press, Chapter 1, pp. 3-24.
- 12. Merton, R. K. 1972, Social Theory and Social Structure, Delhi: Arvind Publishing House, Chapters 4 & 5, pp. 139-171.
- 13. Neuman, Lawrence. 2014. Social Research Methods: Qualitative and Quantitative Approaches (7thed). Pearson Education Limited.
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- 16. Morgan, David L. 1996, "Focus Groups", Annual Review of Sociology 22, pp. 29-52
- 17. Nachmias, David. &Nachmias, Chava. 1981. Research methods in the social sciences. New York: St. Martin's Press.
- 18. Radcliffe-Brown, A. R. 1958, Methods in Social Anthropology, Delhi: Asia Publishing Corporation, Chapter 5, pp. 91-108.
- 19. Srinivas, M.N. et. al. 2002(reprint), The Fieldworker and the Field: Problems and Challenges in Sociological Investigation, New Delhi: OUP, Introduction, pp. 1-14.

SEC-A-(2)

Gender Sensitization

1. What is Gender?

- 1.1 Gender as a category
- 1.2 Gender, Sex and sexuality
- 1.3 Masculinity and Femininity
- 1.4 Private and public dichotomy
- 1.5 Gender stereotypes

2. Gender Construction

2.1 Beyond the gender binary

2.2 Ideas and Discrimination on LGBT

3. Gender Practices and Policies

- **3.1Gender Inequality**
 - 3.1.1 Female Infanticide and Child Marriage
 - 3.1.2 Pocso Act: Overview and Awareness
 - 3.1.3 Eve teasing, Rape, Domestic violence
- 3.2 Gender and Workplace Harassment
 - 3.2.1Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ("POSH Act")
 - 3.2.2 Vishakha judgment and Current situation

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SEC-B-(1)

Theory and Practice of Development

1. What is development?

2. Recent trends in Development and Post development

- 2.1 Social development indicators
- 2.2 Sustainable development
- 2.3 Growth-Development Debate
- 2.4 Private–Public Partnership-PPP

3. Social services & development

- 3.1 Concept of social service
- 3.2 Social services for socialization and development
- 3.3 Participatory development: Gender and Development GAD; Civil society& grassroots initiatives: SHG; NGO
- 3.4 Corporate Social Responsibility-CSR

4. Human Development: Growth vs. Development

- 4.1 Development with dignity
- 4.2 Decentralisation of development: Panchayat & Municipality
- 4.3 MGNREGA
- 4.4 Digital India

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- 23. Thomas, PradipNiman. 2012. *Digital India: Understanding information, communication and social change*. New Delhi: Sage publications India Pvt Ltd.
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SEC-B-(2)

Applications of Statistics for Sociology

- 1. Basic Concepts: Statistics, population, parameter, statistics, Sample, variable
- 2. Definition of Social Statistics and Use of statistics in Social Research
- 3. Frequency Distribution
- 4. Graphical presentation of Data
- 5. Sampling Types and uses
- 6. Coding and Tabulation
- 7. Central Tendency --- Mean, Median, Mode

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- 2. Das N.G.: Statistics
- 3. Kothari, C R Research Methodology, New Delhi: New Age International, 2004.

Discipline Specific Elective

(6 Credits per Course)

Semesters 5 and 6

DSE-A: Semester-5

DSE-B: Semester-6

DSE-A(1) Religion and Society

1. Understanding Religion

- 1.1. Sociology of Religion: Meaning and Scope
- 1.2. Durkheim: Sacred and Profane
- 1.3 Weber: Religious Ethics and Economy

2. Religion in India

- 2.1. Hinduism
- 2.2. Islam
- 2.3. Christianity
- 2.4. Sikhism
- 2.5. Buddhism

3. Secularism & Communalism: Meaning, Characteristics and Factors

- 1. Asad. T. 1993. Genealogies of Religion: Discipline and Reasons of Power in Christianity andIslam, John Hopkins Press: Baltimore, pp 27-54.
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- 14. Uberoi, J.P.S. 1991. 'The Five Symbols of Sikhism' in Madan, T.N. (ed.) *Religion in India*. New Delhi: OUP, pp 320 333.

DSE-A (2)

Family, Marriage & Kinship

1. Introduction to Family, Marriage and Kinship

- 1.1Different forms of family and marriage 1.2Biological, social & cultural kinship

2. Family & Household

- 2.1 Structure & Change; Alternatives & Emergent forms of family; Divorce and Separation
- 2.2 Reimagining families: Unconventional family relationships; families of choice

3. Marriage & Kinship

3.1 Marriage, Alliance, Descent & Prestations

4. Contemporary Issues in Family, Marriage & Kinship

- 1.1 Cultural codes in choice & regulation of marriage
- 1.2 Power & discrimination in the family; Gender gap
- 1.3 New Reproductive Techniques: Assisted Reproductive Technology, Donor insemination, Surrogacy.

- 1. Carsten, J., 2004, 'Introduction' in After Kinship, Cambridge: Cambridge University Press, pp.1-30.
- 2. Carsten, J., 2004, 'Assisted Reproduction' in After Kinship, Cambridge: Cambridge University Press, pp. 163-183.
- 3. Chambers, Deborah. 2012. A sociology of family life: Change and diversity in intimate relations. Cambridge: Polity Press.
- Chowdhry, P., 1998, 'Enforcing Cultural Codes: Gender and Violence in Northern India', in M. E. John and J. Nair (eds.), A Question of Silence: The Sexual Economies of Modern India, New Delhi: Kali for Women, pp. 332-67.
- 5. Dumont, L., 1968, 'Marriage Alliance', in D. Shills (ed.), International Encyclopedia of the Social Sciences, U.S.A.: Macmillan and Free Press, pp.19-23.
- 6. Haralambos and Heald. Sociology-Themes and Perspectives
- Kahn, Susan Martha, 2004, 'Eggs and Wombs: The Origins of Jewishness', in R. Parkin and L. Stone (eds.), Kinship and Family: An Anthropological Reader, U.S.A.: Blackwell, Pp. 362-77
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- 1. Alex, Inkeles. 1975. Sociology. London: Prentice Hall.
- 2. Anthony Giddens. 2013. Sociology (Seventh Edition).
- 3. Berger, Peter. 1966. An Invitation to Sociology A Humanist Perspective. Harmondsworth: Penguin.
- 4. Bottomore, T.B. 1962. Sociology. London: George Allen and Unwin.
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- 7. Fortes, M., 1970, 'The Structure of Unilineal Descent Groups', in M. Fortes, Time and Social Structure and Other Essays, University of London: The Athlone Press, pp. 67-95.
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- 10. Haralambos and Holborn. 2000. Sociology Themes and Perspectives. Collins.
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- 13. John, M. E. et.al., 2008, 'Structural Contexts of Adverse Sex Ratios' in M. E. John et.al., Planning Families, Planning Gender: The Adverse Child Sex Ratio in Selected Districts of

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DSE-B(1) Social Stratification

1. Social Stratification: Concepts and Approaches

- 1.1 Concepts
- 1.2 Approaches- Marx and Weber

2. Forms of Social Stratification

- 2.1 Race and Ethnicity
- 2.2 Caste and Class
- 2.3 Gender
- 2.4 Poverty and Social Exclusion

3. Social Mobility

- 3.1Concepts
- 3.2 Factors
- 3.3 Types

Readings:

- 1. Anthony Giddens: Sociology
- 2. Bilton and others: Introductory Sociology (Macmillan)
- 3. Dipankar Gupta : Social Stratification (OUP)
- 4. G. Rocher: A General Introduction to Sociology
- 5. Gilles Ferreol& Jean-Pierre Noreck: An Introduction to Sociology(PHI Learning)
- 6. Gordon Marshal : Dictionary of Sociology (OUP)
- 7. Harry M. Johnson Sociology
- 8. Henry Tischler: Introduction to Sociology
- 9. J Ross Eshleman & B.G. Cashion: Sociology an Introduction
- 10. M. Haralambas&R. M. Heald: Sociology Themes and Perspectives.
- 11. N. Jayaram : Introductory Sociology (Macmillan)
- 12. N.J. Smelser: Sociology

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- 2. Béteille, A. 1983. 'Introduction in Andre Béteille (ed.): *Equality and Inequality: Theory and Practice*; Delhi: Oxford University Press. pp.1-27.
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- 8. Immanuel, Maurice Wallerstein, *The Construction of Peoplehood, Racism, Nationalism, Ethnicity*, 1991, London Press, pp-71-85.
- 9. Joe, R. Feagin 'The Continuing Significance of Race' *American Sociological Review*, 56, (Feb-91) pp 101-116.
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DSE-B(2)

Gender and Sexuality

1. Gendering Sociology: An overview

2. Gender as a Social Construct

- 2.1. Gender, Sex and Sexuality, Gender role and identity
- 2.2. Gender discrimination and patriarchy, Production of Masculinity and Femininity.

3. Gender: Differences and Inequalities

- 3.1 Caste, Gender and Violence
- 3.2 Domestic and Familial Violence
- 3.3 Public space and violence
- 3.4 Violence, Harassment and the Workplace

4. Gender, Power and Resistance

- 4.1 Power and Subordination
- 4.2 Resistance and Movements (Chipko/ Gulabi Gang)

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3. Sample Events organized related to crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability

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Sample Events organized related to crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability

Serial No.	Name of the activity	Organising unit/ agency/ collaborating agency	Link
1	Key Issues in	IQAC	https://www.thebges.edu.in/key-issues-in-
	Gender		gender-sensitization/
	Sensitization		
2	Understanding	IQAC	https://www.thebges.edu.in/understanding-
	Transgender as a		transgender-as-a-category/
	Category		
3	Changing Face	The Internal	https://www.thebges.edu.in/changing-face-
	of Gender	Complaints	of-gender-equality-in-indian-perspective/
	Equality in	Committee	
	Indian		
	Perspective		
4	10X4	Deans Office	https://thebges.edu.in/10x4-celebrating-
	Celebrating		world-environment-day/
	World		
	Environment		
	Day		
5	Launching of	NSS	https://thebges.edu.in/jal-se-jeevan/
	"Jal se Jeevan"		

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