Telephone No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC6/32/2018-19 Dated: 15th June 2018

NOTIFICATION

Sub: Revision of Economics and Co-Operative Management (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

Ref: 1.Decision of the Board of Studies in Economics and Co-operation (UG) held on 07-03-2018.
2. Decision of the Faculty of Arts Meeting held on 20-04- 2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.

*****

The Board of Studies in Economics and Co-operation (UG) which met on 07th March 2018 has recommended to revise the Economics and Co-Operative Management (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

The Faculty of Arts and the Deans Committee held on 20-04-2018 and 22.05.2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The contents may be downloaded from the University Website i.e.,www.uni-mysore.ac.in

Deputy Registrar (Academic)

Draft Approved by the Registrar

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Arts, Department of Studies in English,Manasagangotri, Mysuru.
3. The Chairman, Department of Studies in Economics and Co-Operation, Manasagangothri, Mysuru.
4. The Chairman, Board of Studies in Economics and Co-Operation, (UG) Manasagangotri, Mysuru.
5. All the Principals of Affiliated/Constituent College running , Economics and Co-Oprative, Management Graduate Programme.
6. The Director, College Development Council, MoulyaBhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB and EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysuru.
9. Office Copy.

UNIVERSITY OF MYSORE

Department of Studies in Economics and Cooperation
Manasagangotri, Mysuru-570 006

Semester System
and
Choice Based Credit System
[Continuous Assessment and Grading Pattern (CAGP)]

Undergraduate Programme for Bachelor of Arts (B.A.)
(Cognate Subject)

ECONOMICS

Revised Syllabus: 2018-2019

ECONOMICS

[Cognate Subject for Bachelor of Arts (B.A.) Programme]

Revised Syllabus: 2018-2019
[Semester with Choice Based Credit System]

Semester	Paper Code No.	Paper No.	Title of the Paper	No. of Credits [L:T:P]	I.A. Marks [C1+C2]	Theory Exam	Total Marks
I	DSC-1A	1	Indian Economy	L:5+T:1=6	10+10	80	100
II	DSC-1B	2	Principles of Microeconomics	L:5+T:1=6	10+10	80	100
III	DSC-1C	3	Principles of Macroeconomics	L:5+T:1=6	10+10	80	100
IV	DSC-1D	4	Mathematics and Statistics for Economics	L:5+T:1=6	10+10	80	100
Student can pursue any one of the combinations from the following Three Elective Groups in V-Semester							
V	**I-Group** of Discipline Specific Electives: TWO Courses/Papers as Paper 5 and Paper 6 in **V-Semester**						
V-Sem 2 DSEs [Elective Courses]	DSE-1.A (i)	5.1	Managerial Economics	L:2+T:1=3	10+10	80	100
	DSE-2.A (i)	6.1	Money, Banking & Public Finance	L:2+T:1=3	10+10	80	100
	OR: **II-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 5 and Paper 6 in **V-Semester**						
	DSE-1.A (ii)	5.2	Agricultural Economics	L:2+T:1=3	10+10	80	100
	DSE-2.A (ii)	6.2	Rural Development	L:2+T:1=3	10+10	80	100
	OR: **III-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 5 and Paper 6 in **V-Semester**						
	DSE-1.A (iii)	5.3	Industrial Economics	L:2+T:1=3	10+10	80	100
	DSE-2.A (iii)	6.3	Labour Economics	L:2+T:1=3	10+10	80	100
	OR: **IV-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 5 and Paper 6 in **V-Semester**						
	DSE-1.A (iv)	5.4	History of Economic Thought	L:2+T:1=3	10+10	80	100
	DSE-2.A (iv)	6.4	Introduction to Econometrics	L:2+T:1=3	10+10	80	100
Student can pursue any one of the combinations from the following Three Elective Groups in VI Semester							
VI	**I-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 7 and Paper 8 in **VI-Semester**						
VI-Sem 2 DSEs [Elective Courses]	DSE-1.B (i)	7.1	Economics of Development	L:2+T:1=3	10+10	80	100
	DSE-2.B (i)	8.1	International Economics	L:2+T:1=3	10+10	80	100
	OR: **II-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 7 and Paper 8 in **VI-Semester**						
	DSE-1.B (ii)	7.2	Cooperative Movement in India	L:2+T:1=3	10+10	80	100
	DSE-2.B (ii)	8.2	Karnataka Economy	L:2+T:1=3	10+10	80	100
	OR: **III-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 7 and Paper 8 in **VI-Semester**						
	DSE-1.B (iii)	7.3	Economics of Natural Resources	L:2+T:1=3	10+10	80	100
	DSE-2.B (iii)	8.3	Environmental Economics	L:2+T:1=3	10+10	80	100
	OR: **IV-Group** of Discipline Specific Electives: **TWO Courses**/Papers as Paper 7 and Paper 8 in **VI-Semester**						
	DSE-1.B (iv)	7.4	Indian Economic Thought	L:2+T:1=3	10+10	80	100
	DSE-2.B (iv)	8.4	Basic Econometrics	L:2+T:1=3	10+10	80	100
Total Number of Credits & Marks [Semester I to VI]				**L:28+T:8=36**	160	640	**800**

Note: Please look to the next page

Note:

1. In order to have a comprehensive coverage of Courses in Economics (as one of the Cognate Subjects in B.A.), it is desirable to offer I-Group (Paper: 5.1 & 6.1) in V-Semester & I-Group (Paper: 7.1 & 8.1) in VI-Semester as first preference.

2. In case, the College intends to offer more than one Discipline Specific Electives (DSE) course/paper, it could offer courses/papers listed in II-Group or III-Group during V-Semester and IV-Semesters.

3. It is preferable to offer the Two Courses/Papers in II-Group, and III Group together in order to have some proper sequencing and coverage in the area of specialization related to the elective subject.
(for ex. 5.2 & 6.2 or 5.3 & 6.3 in V-Semester and 7.2 & 8.2 or 7.3. & 8.3 in VI-Semester)

OR

4. During V-Semester for Course/Paper-5, a student can opt to pursue one paper i.e., either DSE-1.A (ii), or DSE-1.A (iii), or DSE-1.A (iv) and for
Course/Paper-6 in the V-Semester the choice could be either DSE-2.A(ii), or DSE-2.A(iii) or DSE-2.A(iv).

5. During VI-Semester for Course/Paper-7, a student can opt to pursue one paper i.e., either DSE-1.B(ii), or DSE-1.B(iii), or DSE-1.B(iv) and for
Course/Paper-8 in the VI Semester the choice could be either DSE-2.B(ii), or DSE-2.B(iii) or DSE-2.B(iv).

6. Paper 5.4: History of Economic Thought in V-Semester, and 7.4: Indian Economic Thought in VI-Semester, preferably could be offered as an unit depending on the availability of faculty & strength of the students.

7. Similarly Paper 6.4: Introduction to Econometrics in V-Semester and Paper 8.4: Basic Econometrics in VI-Semester, preferably could be offered as an unit depending on the availability of faculty & interest of the students.

AND

8. Besides, I-Group in V & IV Semester, it is up to the Institution/Faculty to decide as to which additional Group/s of Combination/s they intend to offer during V-Semester & IV-Semester, depending on the availability of Faculty and strength of the Students.

9. **The strength of the Students for each DSE shall be minimum of 15 in each semester.**

INSTRUCTIONS:

1. **Teaching Hours** : L:5+T:1=6 Hrs/Credits per week [About 100 Hours for each Course in I, II, III, & IV Semesters]
   : L:2+T:1=3 Hours/Credits per week [About 64 Hours for each Course in V & VI Semester]

2. **Number of Marks for Each Course: 100 Marks**

   Out of 100 Marks: **C3** = 80 Marks is for Theory Examination [Comprehensive End-Semester Examination]
   C1 + C2 = 10 + 10 = 20 Marks is for Continuous Assessment [Per Course in 6 Semesters]

   20 Marks for C1 & C2 shall have the break-up as follows:

   C1: 05 Marks for the First Test + 5 Marks for Assignment [For all the Course in 6 Semesters]
   C2: 10 Marks for the Second Test [For all the Eight Course in 6 Semesters]

Note: Out of total marks allocated to C1 & C2, minimum 30% marks have to be secured by students to write C3 Examination.
[i.e., a student is not permitted to write the End-Semester Examination without securing 30% of marks in C1 + C2 put together]

Abbreviations:

- DSC : Discipline Specific Course
- DSE : Discipline Specific Elective
- GE : Generic Elective
- AEC : Ability Enhancement Courses
- AECC : Ability Enhancement Compulsory Courses
- SEC : Skill Enhancement Courses
- GP : Grade Point
- GPA : Grade Point Average
- SGPA : Subject Grade Point Average
- CGPA : Cumulative Grade Point Average
- MIL : Modern Indian Languages
- L:T:P : Lecture: Tutorials: Practical

PATTERN OF QUESTION PAPER FOR SEMESTER END EXAMINATION

Pattern of Question Paper shall consist of Very Short, Short and Long Answer Questions.

Pattern of Question Paper for Final Exam:

Part I:	(Very Short Answer)	10 Questions x 02 Marks for each Question	= 20 Marks
Part II:*	(Short Answer)	08 Questions x 05 Marks for each Question	= 40 Marks
Part III:**	(Long Answer)	02 Questions x 10 Marks for each Question	= 20 Marks
		Written Examination : **C3**	= 80 Marks
[C1: 5 Marks for Test & 5 Marks for Assignment + C2: 10 Marks for Test]		: **C1 + C2**	= 20 Marks
		TOTAL	**= 100 Marks**

Part I:	(Very Short Answer)	02 Marks each Question	[to answer 10 Questions out of 12]
Part II:*	(Short Answer)	05 Marks each Question	[to answer 8 Questions out of 10]
Part III:**	(Long Answer)	10 Marks each Question	[to answer 2 Questions out of 4*]
			[*4 Questions with internal choice in Part III]

Note: Medium of Instruction is English.
Question Papers will be set both in English & Kannada.
However, the Students have an option to write the Examination in Kannada or English.

Regulations for Choice Based Credit System (CBCS) and Continuous Assessment and Grading Pattern (CBGP) for Undergraduate (UG) Programmes of the University of Mysore, Mysuru

Semester and Programme Structure:

- UG Progrmmes Offered : Faculty of Arts: Bachelor of Arts (B.A)
- Programme Duration : 6 Semesters
- Academic Year : Consists of Two Semesters
- Duration of a Semester : 16 Weeks (6 Day week) with 90 working days.
  Total Duration : 20 Weeks inclusive of Semester end Examination
- Programme Structure : Every Course offered shall have Three Components: L:T:P
  [Lecture (L), Tutorial (T), and Practical (P)]
- Meaning of Credit : A unit by which the course work is measured.
  One hour session of Lecture or Tutorial per week
  for 16 weeks amounts to 1 Credit per semester
- Evaluation : A Course of 3 to 6 credits will be evaluated for 100 marks.
  A Course with less than 3 credits will be evaluated for 50 Marks.

Definitions:

- **Discipline Specific Course (DSC)** is a core course, which should compulsorily be studied by a student as a core requirement of the program.
- **Elective Course** is a course which can be chosen from a pool of courses. It may be very specific or specialized or advanced or supportive to the discipline/subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the student's proficiency/skill.
- **Discipline Specific Elective (DSE)** is a course offered under the main discipline/subject of study or a Project/Dissertation.
- **Generic Elective (GE)** is an elective course chosen from an unrelated discipline/subject with an intention to seek exposure beyond discipline/subject.
- **Ability Enhancement Courses (AEC)** may be of two types:
  (i) Ability Enhancement Compulsory Courses (AECC), and
  (ii) Skill Enhancement Courses (SEC).
- **Ability Enhancement Compulsory Courses (AECC)** are mandatory courses based upon the content that leads to knowledge enhancement viz., Environmental Science, Indian Constitution and English/Modern Indian Languages (MIL)/Communication Skills.
- **Skill Enhancement Courses (SEC)** are aimed at providing hands-on-training, competencies, skills etc,.
- **Grade** is a score assigned to the percentage of the arks awarded in a course.
- **Grade Point (GP)** of a course refers to the product of Credits & the Grade earned by student in that course.
- **Grade Point Average (GPA)** refers to the performance of the student in a given semester. GPA is the ratio of the total grade points earned by the student in all the courses to the total number of credits assigned to the courses in a semester.
- **Subject Grade Point Average (SGPA)** refers to the ratio of the total credit points earned by at the student in all the courses of all the semesters of a single subject to the total number of credits assigned to the courses of all the semesters of that subject.
- **Cumulative Grade Point Average (CGPA)** is the ratio of the total credit points earned by the student in all the courses of all the semesters to the total number of credits assigned to the course of all the semesters.

Medium of Instruction:

- The Medium of Instruction shall preferably be English. However a student can write the examination either in English or Kannada.

Scheme of the Programme:

- The minimum duration for completion of a undergraduate programme is six semesters. However, as pr the double the duration norm of the university, the maximum period permitted is twelve semesters counting from first semester
- A student has to earn 144 credits for the successful completion of a six semester UG programme for the successful completion of UG programme.

Course Registration:

- Every Student is assumed to have registered for all DSC Courses offered in that semester
- A Student is permitted to choose any of the DSE Courses offered by the Department during that Semester.
- A Student is permitted to choose any of the GE Courses offered in the college during that Semester.
- A Student has to register for any MIL along with English language in the first four semesters.
- A student has to register for

Attendance:

- Only those students who have at least 75% attendance in a course, shall be permitted to take C3 examination for that course.
- The list of students who have less than 75% attendance shall be notified by the beginning of the 16th week.

Continuous Assessment:

- Assessment and evaluation processes happen in a continuous mode. However, for reporting purposes, a semester is divided into three discrete components identified as C1, C2, and C3.
- The first component, C1 of assessment is for 10%. During the first half of the semester, the first 50% of the syllabus should be completed; this should be completed by the 8th week of the semester.
- The second component, C2, of assessment is for 10%. C2 will be based on the remaining 50% of the syllabus. C2 should be completed by the 15th week of the semester.
- a student cannot repeat C1 and C2.
- During the 18-20th week of the semester, a semester-end examination shall be conducted by the University for each Course. This forms the final component of assessment (C3) for 80%. The student has to apply for the C3 examination as per the University Notification.

Evaluation for C1 and C2:

- Students will be evaluated for each course by the teacher/s handling that course.

Examination and Evaluation for C3:

- The Question paper pattern for C3 component shall be prepared by the respective Boards of Studies.
- Each subject shall have a Board of Examiners which shall prepare, scrutinize, and approve the question papers for all the courses of that subject.

Passing Criteria:

- A student is considered to have passed the course, only on securing a **minimum for 40% from C1, C2 and C3 put together**.
- A student can take C3 exam irrespective of the marks scored in C1 and C2 of a particular course.
- In case a student secures less than **30% in C3** or absents for C3, the student is said to have not completed the course. The student shall complete the course by re-appearing only C3 component of that course when the University conducts the examination. The student carries the marks already awarded in C1 and C2.
- On successful completion of UG program, a final grade card consisting of grades of all courses successfully completed by the student will be issued by the University

Makeup Examination:

- For students who could not attend C1 and C2 due to medical reasons/extraordinary circumstances/ participation in Sports/ NCC/NSS any other extracurricular activities (approved by the College) C1 and C2 exams will have to be conducted for them separately before 15th week of the semester.
- Makeup examination (only for C3) shall be conducted by the University within 15 days from the date of notification of result. This shall be only for those students who do not fulfill the passing criteria specified earlier.
- Makeup examination (only for C3) shall be conducted only during 5th and 6th Semesters (6 Semester UG programme) or 7th and 8th Semesters (8 Semester UG Programme).

Percentage and Grading:

Percentage (P)	Grade (G)	Percentage (P)	Grade (G)
40-49	5.0	75-79	8.0
50-59	6.0	80-84	8.5
60-64	6.5	85-89	9.0
65-69	7.0	90-94	9.5
70-74	7.5	95-100	10.0

- The overall percentage in a subject is 10 x SGPA
- The over percentage in a programme is 10 x CGPA

Class Declaration:

- The final Quantitative Index to be awarded to the student is based on CGPA. It is given as:

Cumulative Grade Point Average	Quantitative Index
Greater than or Equal to 5 and less than 6	Second Class
Greater than or Equal to 7 and less than 8	First Class
Greater than or Equal to 8 and less than 10	Distinction

Subject Combinations

Bachelor of Arts:

• History, Economics, Kannada	• Economics, Sociology, Geography
• History, Economics, English	• Economics, Political Science, Sociology
• History, Economics, Hindi	• Economics, Political Science, Office Management
• History, Economics, Sanskrit	• Economics, History, Cooperation
• History, Economics, Urdu	• Economics, Political Science, Cooperation
• History, Economics, Political Science	• Economics, Kannada, Journalism
• History, Economics, Geography	• Economics, Geography, Political Science
• History, Economics, Sociology	• Sociology, Economics, Psychology
• History, Economics, Journalism	• Sociology, Economics, Journalism
• History, Economics, Psychology	• Kannada, Economics, Geography
• History, Economics, Public Administration	• Kannada, Economics, Political Science
• History, Economics, Christianity	• Linguistics, Economics, English

Bachelor of Science

- Statistics, Economics, Mathematics
- Economics, Mathematics, Computer Science
- Economics, Statistics, Computer Science

B.A. Cognate Subject: Economics

I-SEMESTER

1: INDIAN ECONOMY

Code No: Econ. DSC-1.A [L: 5 + T: 1 = 6 Credits Per Week]

Module-1: Structure of Indian Economy

Features of Indian Economy - Population: Size and Growth Rate of Population in India - Population Policy.
National Income of India: National Income Estimates in India - Trends and Composition - Difficulties of Measuring National Income in India. Poverty, Unemployment and Inequalities of Income in India - Measures to Check Poverty and Unemployment

Module-2: Agriculture Sector in India

Place of Agriculture in the National Economy since 1991 - National Agriculture Policy - Food Security in India - Modernization of Indian Agriculture - Problems of Agricultural Labourers

Module-3: Indian Industries

Importance of Industrialization - Industrial Policies since 1991 - Problems of Large Scale Industries - Role and Problems of Small Scale Industries - Emergence of IT Industry.

Module-4: Tertiary Sector in India

India's Foreign Trade: Trends, Composition and Direction of Foreign Trade in India - India's Balance of Payments Since 1991.
Reserve Bank of India: Functions and Credit Control Measures - Reforms in Banking - Financial Sector Reforms - Demonetization.

Module-5: Five Year Plans and Fiscal System

Achievements and Failures of Five Years Plans - NITI Ayoga - 14th Finance Commission - Goods and Services Tax (GST) - Current Year Union Budget (a Brief Note)

References:

1. Agarwal A.N. *Indian Economy: Problems of Development and Planning,* Wishwa Prakashan, New Delhi.
2. Dutt Ruddar and Sundaram K.P.M. *Indian Economy,* S. Chand and Co., New Delhi.
3. Misra S.K and V.K Puri. *Indian Economy,* Himalaya Publishing House, Mumbai.
4. Ramesh Singh. *Indian Economy,* McGraw Hill Education, New Delhi.

B.A. Cognate Subject: Economics

II-SEMESTER

2. PRINCIPLES OF MICROECONOMICS

Code No: Econ. DSC-1.B [L: 5 + T: 1 = 6 Credits Per Week]

Module-1: The Fundamentals of Economics

Meaning of Economics - Microeconomics: Meaning - Nature and Scope - Importance and Limitations - Basic Problems of Economics - Production Possibility Curve.

Module-2: Consumer Behaviour

Cardinal Analysis: The Concept of Utility - The Law of Diminishing Marginal Utility - Law of Equi-Marginal Utility - Theory of Consumer's Surplus - Limitations of Cardinal Analysis.
Ordinal Analysis: Indifference Curves - Meaning - Indifference Schedule - Indifference Map - Properties of Indifference Curves - Consumers' Equilibrium - Change in Consumers Equilibrium: Income, Price and Substitution Effect - Criticisms of Indifference Curve Analysis.

Module-3: Theory of Demand and Supply

Demand: Meaning, Determinants of Demand, The Demand Schedule - The Law of Demand - Exceptions to the Law of Demand - Elasticity of Demand: Meaning - Types: Price, Income and Cross Elasticity - Measurement of Price Elasticity of Demand.
Meaning of Supply: The Law of Supply, Determinants of Supply.

Module-4: Production, Cost and Revenue Concepts

Production Function - The Law of Variable Proportion - The Law of Returns to Scale
Concepts of Costs: Explicit, Implicit, Fixed, Variable, Total, Marginal, Average, Average Fixed, Average Variable and Opportunity Cost. Short-Run and Long-Run Cost Curves.
Concepts of Revenue: Total, Average and Marginal Revenue Curves.

Module-5: Product and Factor Pricing

Product Pricing: Perfect Competition: Features - Price and Output Determination - Role of Time Element.
Monopoly: Types - Features - Price and Output Determination - Price Discrimination
Monopolistic Competition: Features - Price and Output Determination - Product Differentiation
Oligopoly: Types - Features - Kinked Demand Curve.

Factors Pricing: Marginal Productivity Theory and Modern Theory of Distribution.

References:

1. McConnel R.Campbell and Stanley Brue. 16th Edition, *Microeconomics*, McGraw Hill Irwin, NY.
2. Mithani D.M. *Modern Economic Analysis*, Himalayan Publishing House, Mumbai.
3. Mukherjee Sampat. *Modern Economic Theory*, New Age International Publishers, New Delhi.
4. Samuelson.P.A. 18th Edition, *Economics*, Tata McGraw- Hill Publishing Co., Limited, New Delhi.
5. Sen Anindya. *Microeconomics: Theory and Applications*, Oxford University Press, New Delhi.

B.A. Cognate Subject: Economics

III-SEMESTER

3. PRINCIPLES OF MACROECONOMICS

Code No: Econ. DSC-1.C [L: 5 + T: 1 = 6 Credits Per Week]

Module-1: An Overview of Macroeconomics

Meaning of Economics - Macroeconomics: Types and Scope - Importance and Limitations - Basic Concepts of Macroeconomics, Stocks, Flow and Equilibrium.

Module-2: Classical Theory of Employment

Basic Assumptions of Classical Theory - Classical Theory of Employment - Say's Law of Market - Wage - Price Flexibility (Pigou's Version) - Saving and Investment Equality - Evaluation of the Classical Theory of Employment.

Module-3: Keynesian Theory

Concepts of Effective Demand and its Determinants
Equilibrium Level of Income and Employment.
Consumption Function: Psychological Law of Consumption, Factors Affecting Consumption Function.
Investment Function: Factors Affecting Investment Function.
Multiplier - Evaluation of the Keynesian Theory of Employment

Module-4: Business Cycle and Macroeconomic Policy

Inflation: Meaning and Types - Causes and Effects of Inflation - Inflationary Gap.
Deflation: Meaning - Causes and Effects of Deflation - Deflationary Gap.
Business Cycle: Meaning, Types and Phases of Business Cycle - Measures to Control Business Cycle.

Module-5: Macroeconomic Policy

Monetary Policy: Objectives and Importance - Quantitative and Qualitative Measures and Fiscal Policy: Objectives and Importance - Tax, Expenditure, Debt and Budgetary Measures.

References:

1. Mithani.D.M. *Modern Economic Analysis*, Himalaya Publishing House, Mumbai.
2. Ahuja, H. L. Macroeconomics (Theory & Policy). S. Chand & Company, New Delhi.
3. Mukherjee Sampat. *Modern Economic Theory*, New Age International Publishers, New Delhi.
4. Samuelson P.A. 18th Edition, *Economics*, Tata McGraw- Hill Publishing Com., Limited, New Delhi.
5. Vaish. M.C. *Macroeconomic Theory*, Vishwa Prakashan, New Delhi.

B.A. Cognate Subject: Economics

IV-SEMESTER

4. MATHEMATICS AND STATISTICS FOR ECONOMICS

Code No: Econ. DSC-1.D [L: 5 + T: 1 = 6 Credits Per Week]

Module-1: Introduction

Nature and Scope of Mathematical Economics - Importance and Limitations of Mathematics in Economic Theory
Functions and Functional Relationship: Variables, Constants, Parameters: Absolute and Arbitrary Constant, Equation and Identities.
Linear Functions: Two Point Formula. Non-Linear Function: Quadratic Functions.
Set: Meaning, Types Union of Sets and Intersection of Sets.
Matrix: Meaning. Basic Operation: Addition, Subtraction and the Determinants.

Module-2: Application of Linear Functions

Equilibrium of Supply and Demand: Impact of Specific Tax and Subsidy on Equilibrium.

Module-3: Derivatives of Function

Concept of Continuity and Limit - Rules of Differentiation: Application to Derive MR and MC. Elasticity of Demand - Revenue and Profit Maximization and Cost Minimization.

Module-4: Definition and Scope of Statistics

Definition, Scope and Importance of Statistics in Economics and its Limitation.
Sources of Data: Primary and Secondary Sources.

Module-5: Measures of Central Tendency and Dispersion

Measures of Central Tendency: Arithmetic Mean, Median and Mode.

Measures of Dispersion: Range, Inter- Quartile Range, Mean Deviation and Standard Deviation.

Index Number: Paasche's, Laysper's, Marshall-Edgeworth and Fisher's Ideal Index Number.

References:

1. Gupta S. P. *Statistical Methods*, S. Chand, New Delhi.
2. Anderson David R, Dennis J. Sweeney and Thomas A. Williams. (2002) *Statistics for Business and Economics*, Thomson South-Western, Singapore.
3. Bose D. *An Introduction to Mathematical Economics*, Himalaya Publishing House, Mumbai.
4. Veerachamy R. *Quantitative Methods for Economics*, New Age International (P) Ltd., New Delhi.

GROUP-1 [Paper-1]

B.A. Cognate Subject: Economics

V-SEMESTER

5.1: MANAGERIAL ECONOMICS

Code No: Econ. DSE-1.A (i) [L: 2 + T: 1 = 3 Credits Per Week]

Module-1: Introduction

Meaning and Definition of Managerial Economics - Nature, Scope and Importance of the Study of Managerial Economics - Application of Basic Economic Principles to Managerial Problems: Incremental, Discounting, Time Perspective, Opportunity Cost and Equi-Marginal Principle.

Module-2: Demand Forecasting

Meaning, Objective and Determinants of Demand Forecasting Methods: Complete Enumeration and Sample Survey Methods - Statistical Methods - Semi Average, Moving Average and Least Square Methods (with Emphasis on Problems).

Module-3: Linear Programming

Meaning - Basic Concepts - Applications of Linear Programming - Cost Minimization and Profit Maximization - Graphic Method - Procedure used in Formulating and Solving Linear Programming Problem.

Module-4: Pricing Policy

Meaning, Objectives and Methods - Cost Plus or Mark-Up Pricing, Multiple Product Pricing - Skimming and Penetration Pricing Policy.

Module-5: Profit Management and Capital Budgeting

Meaning of Profit - Accounting Profit and Economic Profit, Break-Even Analysis - Problems, Break-Even Quantity, Break-Even Sales - Targeted Profit, Safety Margin.
Capital Budgeting: Meaning and Importance - Techniques: Payback Period and Net Present Value (NPV) Method.

Field Activity

Importance of Field Activity - Preparation of Field Activity Report
Visit to Agricultural Field, Cooperatives, Business Units: Individual Proprietorship, Partnership firms, Small Scale, Medium and Large Scale Industries, Self-Employment Units, Financial Institutions, Education Institutions, Hospitals etc.,

References:

1. Mehta P L. *Managerial Economics*, Sultanchand & Sons, New Delhi.
2. Dwivedi D.N. *Managerial Economics*, Vikas Publishing House Pvt., Ltd, New Delhi.
3. Mithani D.M. *Managerial Economics*, Himalaya Publishing House, Mumbai.
4. Peterson H. Craig and W. Cris Lewis, *Managerial Economics*, Pearson Education Singapore.
5. Salvatore Dominick. *Managerial Economics*, McGraw Hill, New York.
6. Seo K.K. *Managerial Economics*, Sujeet Publications, Delhi.

GROUP-1 [Paper-2]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-2.A (i) [L: 2 + T: 1 = 3 Credits Per Week]

6.1: MONEY, BANKING AND PUBLIC FINANCE

Module-1: Money

Meaning of Money - Functions of Money- Theories of Money: Quantity Theory of Money and Restatement of Quantity Theory of Money.

Module-2: Banking

Types of Banks: Unit and Branch Banking - Importance of Banking (Resource Mobilization and Investment) - Balance Sheet- Credit Creation.

Module-3: Public Finance

Nature, Scope and Importance of Public Finance - Principle of Maximum Social Advantage - Difference between Public and Private Goods - Welfare Functions - Functions of Modern Governments.

Module- 4: Pubic Revenue, Expenditure and Debt

Public Revenue: Sources of Public Revenue: Tax and Non-Tax (Direct and Indirect) - Characteristics of Good Tax System

Public Expenditure: Meaning and Types - Wagnar's Law of Expenditure

Public Debt: Meaning and Types- Debt Redemption

Budget: Meaning and Classifications of Budgets: Deficit, Surplus, Balanced, Zero-Based Budget - Performance based and Programme based Budget, Gender Budgeting, Green Budgeting. Types of Deficit: Primary, Fiscal, Budgetary - Deficit Financing.

Field Activity

Importance of Field Activity - Preparation of Field Activity Report.

Visit to Banking and Financial Institutions, Government Organizations, Budget Presentations, Exposure to the Functioning and Activities of State and Local Governments, City Municipalities and Corporations (ANY ONE)

References:

1. Agarwal R.C.*Public Finance Theory and Practice*, Educational Publishers, Agra.
2. Bhatia H.L. *Public Finance*, Vikas Publishing House Pvt. Ltd, New Delhi
3. Musgrave R.A and Musgrave. *Public Finance in Theory and Practice,* Tata McGraw-Hill Education.
4. Singh S.K. *Public Finance in Theory and Practice*, S.Chand and Co., Ltd., New Delhi.
5. Sundaram K.P.M and K.K. Andley. *Public Finance*, S Chand & Co., Ltd, New Delhi.
6. Ulbrich Holley. *Public Finance in Theory and Practice*, Thomson South-Western, USA

GROUP-2 [Paper-1]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-1.A (ii) [L: 2 + T: 1 = 3 Credits Per Week]

5.2: AGRICULTURAL ECONOMICS

Module-1: Agriculture and Economic Development

Definition and Scope of Agriculture Economics - Agriculture in a Growing Economy - Interdependence between Agriculture and Industry - Farming System: Traditional, Subsistence, Commercial, Cooperative, Collective and State Farming - Role of Agriculture in Economic Development.

Module-2: The Economics of Agriculture Production in India

Features of Indian Agriculture: Farm Size, and Productivity. Extent of Employment and Unemployment in Agriculture - Technical Change and Labour Absorption - Women in Agriculture - Wage Discrimination

Module-3: Factors Affecting Agriculture Growth and Productivity

Size of Land Holdings - Land Reforms - Supply of Inputs: Irrigation, Power, Seed and Fertilizer - Determination of the Prices of Agricultural Commodities - Agricultural Prices Policy in India - Crop Insurance.

Module-4: Agricultural Credit in India and Agricultural Markets

Demand and Supply of Agricultural Credit, Non- Institutional and Institutional Agricultural Credit: National Bank for Agriculture and Rural Development [NABARD], Cooperatives, Commercial Banks, and Regional Rural Banks.

Agricultural Markets: Types of Agricultural Markets: Cooperative Marketing and Regulated Markets: Structure and Functioning of Agricultural Market, Merits and Limitations - e-Marketing.

Module-5: Challenges to Indian Agriculture

Trends in Agricultural Development under the Five Year Plans - Policies and Programmes for Agricultural Development - Green Revolution and its Impact - Sustainable Agriculture - New Agricultural Policy - World Trade Organization and Indian Agriculture

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Socio-Economic Survey - Visit Agricultural Field, Horticultural Farms, Major and Minor Irrigation Facilities, Agricultural Markets, Regulated Markets, Vegetable and Fruit Markets - Whole-Sale and Retail Units, Agricultural Universities, Cooperatives, Rural Economy, Agricultural Financing Units - Exposure to Organic Farming etc., (ANY ONE)

References:

1. Dandekar V.M. *The Indian Economy 1947-1992*, Vol-I Agriculture, Sage Publications India Pvt., Ltd, New Delhi.
2. Desai R.G. *Agricultural Economics*, Himalaya Publishing House, Mumbai.
3. Tyagi B.P. *Agricultural Economics and Rural Development*, Jaiprakash Nath and Co. Meerut.

GROUP-2 [Paper-2]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-2.A (ii) [L: 2 + T: 1 = 3 Credits Per Week]

6.2: RURAL DEVELOPMENT

Module-1: Introduction to Rural Development

Definitions - Objectives and Importance of the Study of Rural Development - Characteristics of Rural Economy - Society and Polity

Module-2: Approaches to Rural Development

Gandhian Approach - Sectoral Approach - Cluster Approach - Service Area Approach - Integrated Approach - Participatory Approach

Module-3: Rural Development Programmes

Dimensions of Rural Unemployment and Poverty - a Brief Review of the Ongoing Rural Development Programmes for Poverty Alleviation in India- Rural Infrastructure (Economic and Social) Programmes - Gender Bias in Rural Development.

Module-4: Rural Industrialization

Growth and Development of Rural Industries: Indian Rural Industrial Cooperatives (Small Scale and Cottage Industries) - Structural and Promotional Measures.

Module-5: Rural Institutions

Rural Social Institutions - Panchayat Raj Institutions - Role of Non-Governmental Organizations (NGOs) and Self Help Groups (SHGs) in Rural Development - Impact of Globalization on Rural Development.

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Visit to Villages, Agricultural Fields, Village and Cottage Industries, Rural Cooperatives, Rural Development Activities Sites - Exposure to Economic Activities of Local Self Governments: Gram Panchayat, Taluk Panchayat, Conducting of Socio-Economic Survey (ANY ONE)

References:

1. Government of India, *Annual Reports*, Ministry of Rural Development, New Delhi.
2. Government of India, *Five Year Plan Documents (VI to XII Plan)* Planning Commission, New Delhi.
3. Katar Singh. *Rural Development: Principles, Policies and Management*, Sage Publications, New Delhi.
4. Parthasarathy G. (2003) *Economic Reforms and Rural Development*, Academic Foundations, New Delhi.
5. Satya Sundaram I. (1997) *Rural Development*, Himalaya Publishing House, Mumbai.
6. Sharma D.P. and V.V. Desai. *Rural Economy of India* (1990) Vikas Publishing House Pvt., Ltd, New Delhi.

GROUP-3 [Paper-1]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-1.B (ii) [L: 2 + T: 1 = 3 Credits Per Week]

5.3: INDUSTRIAL ECONOMICS

Module-1: Introduction

Definition and Subject Matter - Evolution and Development of Industrial Economics - Objectives and Methods - Relationship between Industrial Economics and Economics - Industrial Economics as a Branch of Economics

Module-2: Theory of Firm

Concept of Firm, Features and Objectives - Size of Firm - Optimum Firm and its Determinants - Growth of Firm - Determinants of Growth - Theories of Growth of Firm: Downie's Theory, Penrose's Theory and Morris Theory.

Module-3: Industrial Organization and Industrial Location

Concept of Industrial Organization - Different Forms of Industrial Organization: Proprietorship - Partnership - Joint Stock Companies - Holding Companies, and Industrial Cooperative Organizations - Corporation. Choice of Organizational Form - Concept of Industrial Location - Determinants of Location - Dynamics of Industrial Location - Theories of Industrial Location: Weber's Theory and Sangent Fhoience's Theory. Industrial Location Policy: Objectives and Importance.

Module-4: Industrial Productivity and Efficiency

Concept of Industrial Productivity - Measurement Total Factor and Single Factor Productivity - Determinants of Productivity - Importance of Productivity - Efficiency Concept - Determinants of Economic Efficiency - Measurement of Efficiency Levels.

Module-5: Government Regulation of Industry

Need for Government Regulation - Controversy Regarding Regulation - Methods of Government Regulation - Legal Frame Work - Changing Approach in Government

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Visit to Industrial Locations and Organization: Proprietorship, Partnership, Joint Stock Companies, Holding Companies, Industrial Cooperative Organizations, and Exposure to Industrial Problems, Impact of Industrial Sickness, Industrial Pollution and its impact on the Health etc., (ANY ONE)

References:

1. Bharatwal R.R. *Industrial Economics*, New Age International, New Delhi
2. Divine A.J and Others. *An Introduction to Industrial Economics*
3. Francis Cherunilam. *Industrial Economics*, Himalaya, New Delhi
4. Hay D.A and Morris D.J. *Industrial Economics: Theory and Evidence*, OUP, Oxford.
5. Singh and Sadhu. *Industrial Economics*, Himalaya Publishing House, Mumbai.

GROUP-3 [Paper-2]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-2.B (ii) [L: 2 + T: 1 = 3 Credits Per Week]

6.3: LABOUR ECONOMICS

Module-1: Introduction

Labour Economics Concept and Definition - Nature, Scope and Importance - Labour as a Unique Factor of Production - Labour Economics as a Branch of Economics - Interdisciplinary Character of Labour Economics

Module-2: Labour Market

Concept of Labour Market and its Features - Difference between Labour Market and Commodity Market - Labour Market Imperfections and Factors Contributing to Imperfections - Determinants of the Supply and the Demand for Labour - Organized and Unorganized Labour

Module-3: Employment

Concept of Employment and Full Employment - Need for Full Employment - Theories of Employment - Classical, Neo-Classical and Modern Approaches to Employment - Unemployment, Causes and Consequences - Technology and Employment - Information Technology Revolution and Employment.

Module-4: Wages

Wage Concept and Definitions - Wage and Development - Theories of Wages, Classical, Marginal Productivity and Collective Bargaining Theory of Wage - Wage Differentials - Wage Policy, Objectives and Importance.

Module-5: Labour Productivity and Labour Welfare

Concept of Labour Productivity - Measurement and Importance of Labour Productivity - Determinants - Causes for Low Labour Productivity and Measures to Increased Labour Productivity - Technology and Labour Productivity. State and Labour: Need for State Intervention in Labour Matters - Methods of Intervention - Labour Social Security and Labour Welfare Measures - Labour Policy, Objectives and Importance - Emerging Perception on State Intervention.

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Visit to Organized and Unorganized Labour Market, Working Conditions of Labour in Agricultural Sector and industrial Sector, Working Conditions, Facilities at Work, Wage Discrimination, Organized Labour Markets, ESI Hospital, and Exposure to Problems of Labour - Conducting of Survey on the conditions of Labour. (ANY ONE)

Reference:

1. Bhagoliwal T.N. *Economics of Labour and Industrial Relations*, Sahitya Bhavan, Agra.
2. McConnell C.R. and S.L. Brue *Contemporary Labour Economics*, McGraw Hill, New York.
3. Mittal and Sanjay Prakash Sharma. *Labour Economics*, RSBA, Jaipur.

GROUP-4 [Paper-1]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-2.A (iv) [L: 2 + T: 1 = 3 Credits Per Week]

5.4: HISTROY OF ECONOMIC THOUGHT

Module-1: Introduction

Economic Thought During Ancient Period, Mercantilism and Physiocracy (a Brief Introduction).

Module-2: Classical School

Adam Smith: Theory of Value, Division of Labour, Canon of Taxation, Free Trade
David Ricardo: Theory of Value, Theory of Rent, Trade Theory.
T.R. Malthus: Theory of Population - Under Consumption Theory.

Module-3: Neo-Classical School

Alfred Marshall - Theory of Value, Utility Analysis.

Module-4: Karl Marx

Materialistic Interpretation of History, Surplus Value and Class Struggle

Module-5: J. M. Keynes

Theory of Income and Employment Determination

Module-6: Post Keynesian Approach

P. A. Samuelson: Revealed Preference Theory (Social Welfare Function and His Contribution to International Trade)
Gunnar Myrdal: Theory of Under Development and Development,
Simon Kuznets: National Income T.W. Schultz - Agricultural Labour.

Activity

Preparation of a Biographic Note on the any one of the Economists discussed in the Syllabus and presentation of the same in the Class.

References:

1. Bell John Fred. *History of Economic Thought*, the Ronald Press Company, New York.
2. Bhatia. H.L. *History of Economic Thought*, Vikas Publishing House Pvt., Ltd India.
3. Brue Stanley L. *The Evolution of Economic Thought*, The Dryden Press, Fort Worth, USA.
4. Haney Lewis H. *History of Economic Thought*, The Macmillan Company, New York.
5. Roll Eric. *A History of Economic Thought*, Prentice Hall Inc, USA.

GROUP-4 [Paper-2]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-1.A (iv) [L: 2 + T: 1 = 3 Credits Per Week]

6.4: INTRODUCTION TO ECONOMETRICS

Module-1: Nature and Scope of Econometrics

Meaning of Econometrics - Relationship between Econometrics and Statistics - Econometrics and Mathematical Economics - Econometrics and Economics - Methodology of Econometrics - Types of Econometrics

Module-2: Concepts of Population

Concepts of Population and Sample - Sources of Statistical Error - Sampling Design - Sampling Techniques

Module-3: Statistical Inference

Basics of Probability and Statistics - Summation - Notation - Properties of Summation Operation - Random Variables Probability - Random Variables and Probability Distribution Function - Characteristics of Probability Distribution. Some Important Probability Distributions: Normal Distribution, the Chi-Square Distribution, 'T' Distribution, and F Distribution - Testing of Hypothesis - the Meaning of Statistical Inference, Point Estimation and Interval Estimation, Properties of Point Estimation.
Hypothesis Testing - Confidence Interval Approach - Type-I and Type-II Errors - Level of Significance

Module-4: Data Analysis

Time Series Data - Cross Section Data and Pooling Data - Sources of Data - Primary and Secondary Sources, Importance of Time Series and Cross Section Data.

Module-5: Practical Work:

Exposure to Census Reports - National Sample Survey - Conducting of Surveys - Collection of Data - Compilation and Presentation in the form of Tables and Graphs etc.,

References:

1. Damodar Gujarati. *Essentials of Econometrics*, McGraw Hill International Edition Economic Series.
2. Sonia Taylor. *Business Statistics*, Palgrave, Macmillan Press, New York.
3. Sukesh K Ghosh. *Econometrics-Theory and Applications*, Prentice Hill of India Private Limited, New Delhi.

GROUP-1 [Paper-1]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-1.B (i) [L: 2 + T: 1 = 3 Credits Per Week]

7.1: ECONOMICS OF DEVELOPMENT

Module-1: Economic Development

Concept of Development - Definitions - Distinction between Economic Growth and Development - Indicators of Development - Measures of Economic Development: Gross National Product (GNP) - Physical Quality of Life Index (PQLI), Human Development Index (HDI), Gender Empowerment Measure (GEM).

Module-2: General Theories of Economic Growth

Adam Smith's Theory - T.R. Malthus' Theory - Karl Marx's Theory - Schumpeter's Theory and Rostow's Growth Theory - Harrod-Domar Model.

Module-3: Partial Theories of Economic Development

Lewis Labour Surplus Model - Rodan's Big Push Theory - Leibenstein's Critical Minimum Effort Approach - Balanced Vs Unbalanced Growth.

Module-4: Factors in the Development Process

Capital Accumulation - Capital-Output Ratio - Technology and Economic Development - Institutional Factors: State and Markets - Market Failure - State Failure - Rethinking on the Role of the State. Sustainable Development - Inclusive Development - Millennium Development Goals - Sustainable Development Goals

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Visit to Tribal Areas, Villages, Cities, Agricultural Sector, Industrial Sector, Banking Sector, Exposure to Infrastructure Facilities, Health Care Centers, Education Institutions, Self-Help Groups, Non-Government Organizations, Government Offices, Municipalities, Panchayats, Business Centers, Markets - Exposure to Socio- Economic Survey (ANY ONE).

References:

1. Benjamin Higgins. *Economic Development*, W.W. Norton & Company. Inc. New York.
2. Mishra S.K and V.K. Puri. *Economic Development and Planning*, Himalaya Pub., House, Mumbai.
3. Taneja M.L. and G. M. Meier. *Economics of Development and Planning*, S. Chand and Co, Delhi.
4. Thirlwall A.P. *Growth and Development: With Special Reference to Developing Economies*, Palgrave Macmillan, New York.
5. Todoaro. M.P. *Economic Development in the Third World*, Orient Longman, United Kingdom

GROUP-1 [Paper-2]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-2.B (i) [L: 2 + T: 1 = 3 Credits Per Week]

8.1: INTERNATIONAL ECONOMICS

Module- 1: Introduction and Theories of International Trade

Meaning and Importance of International Economics - Distinction between Internal and International Trade - Theories of Absolute Cost Advantage and Comparative Cost - Heckscher-Ohlin Theory - Leontief Paradox

Module- 2: Terms of Trade

Meaning, Various Concepts and Factors affecting Terms of Trade - J.S Mill's Reciprocal Demand - Deterioration in Terms of Trade: Prebisch-Singer Theory and Jagadesh Bhagavthi's Immesirising Economic Growth.

Module- 3: Trade and Commercial Policy

Free Trade Vs Protectionist Policy - Relative Merits and Demerits.
Tariffs: Types and Effects of Tariffs. Quotas: Types and Effects of Quotas.
Role of Multinational Corporations - Trade Liberalization - World Trade Organization (WTO) and its Functions - WTO and India

Module- 4: Balance of Payment and Foreign Exchange

Concepts of Balance of Trade and Balance of Payments - Disequilibrium in the Balance of Payments - Various Measures to Correct Disequilibrium in the Balance of Payments. Merits and Demerits of Devaluation - Meaning and Determinants of Foreign Exchange

Module- 5: International Financial and Trade Cooperation

Objectives and Functions of (IMF) and (IBRD) - New International Economic Order (NIEO) -South Asian Association for Regional Cooperation (SAARC) and Brazil, Russia, India, China and South Africa (BRICS)

References:

1. Mannur H.G. *International Economics*, Vikas Publishing House Pvt., Ltd., New Delhi.
2. Mithani D.M. *International Economics*, Himalaya Publishing House, Mumbai.
3. Salvatore Dominick. *International Economics*, John Wiley & Sons, Inc.

GROUP-2 [Paper-1]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-2.B (iii) [L: 2 + T: 1 = 3 Credits Per Week]

7.2: COOPERATIVE MOVEMENT IN INDIA

Module-1: Concept of Cooperation and Contributions to Cooperatives

Evolution of Cooperative Principle - Cooperative Thought - Robert Owen, Charles Fourier - Rochdale Principles - Post-Rochdale Thinkers: Mahatma Gandhi's views on Cooperation- ICA Principles: 1937, 1966 - Committees and Commissions on Cooperatives - Cooperation and Other Economic Systems -Cooperative Movement in Developed Countries: Germany , Great Britain, Israel, and Japan

Module-2: Cooperative Movement in India

Origin and Growth of Cooperative Movement in India - Pre and Post-Independence Developments - Cooperative Credit Societies Acts - Government of India Act, 1935 - National Policy on Cooperatives Cooperative Credit Movement in India - Structure of Cooperative Credit Agencies -NABARD - Non Credit Cooperatives - Structure & Progress of Consumer Cooperatives, Marketing Cooperatives, Processing Cooperatives, Dairy Cooperatives and Industrial Co-operatives - State Participation in Cooperation - Cooperative Education - National and State Level Cooperative Organizations.

Module-3: Credit and Non-Credit Cooperatives in India

Organizational Pattern and Evolution - Cooperative Credit Movement in India: Importance, Structure and Functioning of PACCS, CCBs, SCB, PCARDBs, SCARDBs, Urban Cooperative Banks - Housing Cooperatives - Industrial Cooperative Banks - NABARD - Recommendations of CRAFICARD.
Non Credit Cooperatives - Structure, Constitution, Working performance of Non-Credit Cooperatives: Advantages and Limitations of State Aid - Officials and Non-officials in Cooperative Movement.

Module-4: Cooperative Management

Principles of Cooperatives Management - Cooperative Administration - Governance Structure - Management of Cooperative Societies, Credit and Non-Credit Cooperatives - Human Resource Management - Issues in Cooperative Management: Strategies for Sustainable Development of Cooperatives in India - Management Information System in Cooperatives - Cooperative Marketing Management - Cooperative Governance - Challenges for Cooperative Movement.

Module-5: Cooperative Legislation, Accounting, Auditing

Need for Separate Law for Cooperatives - Review of Cooperative Legislations - Cooperative Account Keeping - Accounting in PACS, Central Organization, Banks, State Cooperative Apex Bank. Administrative setup of Cooperative Audit in India

Field Activity: Visit to Cooperative Societies and Organizations

References: [Please refer to the Latest Editions]

1. Ajit Kumar, (2002) *Cooperation***,** Himalayan Publishing House, Mumbai.
2. Bedi R.D., (1980) *Theory, History and Practice of Cooperation*, Loyal Book Depot, Meerut.
3. Hajela T.N, (2010) *Cooperation: Principles, Problems and Practice*, Konark Publishers, Delhi.
4. Krishnasamy O.R (1992), *Cooperative Account Keeping*, Oxford IBH Co, Ltd., New Delhi.
5. Kulandaisamy, V (2000), *Cooperative Management*, Arurdhra Academy, Coimbatore.
6. Mathur B.S., (2015) *Cooperation in India*, Sahitya Bhawan, Agra.
7. Nakkiran S (2013), *Cooperative Management*, Deep and Deep Publications, New Delhi.
8. Puri, S.S. (1979), *Ends and Means of Cooperation*, NCUI, New Delhi.
9. Rajagopalan R (1996) *Rediscovering Cooperation (Vol.I,II,III)*, IRMA, Anand.

GROUP-2 [Paper-2]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-2.A (iii) [L: 2 + T: 1 = 3 Credits Per Week]

8.2: KARNATAKA ECONOMY

Module-1: Introduction

Characteristics of Karnataka Economy - Place of Karnataka Economy in India – Population - Natural Resources in Karnataka: Land, Forest, Mineral, Energy and Water - Human Resources in Karnataka.
- Impact Ecological Imbalance on the Environment - Impact on Health - State GDP and PCY.

Module-2: Agriculture in Karnataka

Importance of Agriculture - Problems in Agriculture - Land Reforms - Cropping Pattern - Agriculture Price Policy - Irrigation - Watershed Development - Dry Land Farming - Public Distribution System. Inter-State Water Disputes - Farmers Suicide - Decentralization of Planning and Panchayat Raj Institutions - Rural Development Programmes.

Module-3: Industries in Karnataka

Major Industries in Karnataka - Problems and Prospects - Importance of Small Scale and Cottage Industries - Problems and Measures - IT Industries in Karnataka - Industrial Finance in Karnataka.

Module-4: Infrastructure in Karnataka

Physical Infrastructure Facilities: Transportation: Road, Rail, Water and Air Transport, Information and Communication Technology facilities.
Social Infrastructure Facilities: Drinking Water, Sanitation, Housing - Health - Education - Social Security in Karnataka.

Module-5: Poverty, Unemployment and Regional Imbalances in Karnataka

Concept of Poverty - Magnitude - Poverty Alleviation Programmes in Karnataka - Unemployment and Magnitude of Unemployment - Employment Programmes
Extent of Disparities, Causes and Consequences, Identification of Backward Areas - Measures to Reduce Imbalance - High Power Committee Recommendations - Planning Machinery, Financing and Implementations.

Module-6: State Finance

Sources of Revenue: Direct and Indirect - Sharing of Central Taxes and Grand-in-Aid, Expenditure Sources- States Indebtedness - State Finance Commission - State Budget - GST.

Field Activity: *Importance of Field Activity - Preparation of Field Activity Report.*
Visit to Rural Economy, Agricultural Lands, Industries, IT Sector, Status of Infrastructure sites Facilities, Self-Help Groups etc., (ANY ONE)

References:

1. Government of Karnataka, Economic Survey [Various Issues]
2. Planning Department, Annual Publication, Government of Karnataka.
3. Karnataka at Glance, Annual Publication Government of Karnataka.
4. Madaiah M & Ramapriya. *Karnataka Economy Growth: Issues and Development,* Himalaya Pub., House, New Delhi.
5. Adul Aziz and K.G. Vasanti. (Eds) *Karnataka Economy*.
6. Government District Development Reports
7. Hanumantha Rao. *Regional Disparities and Development in Karnataka*.
8. Krishnaiah Gowda H.R. *Karnataka Economy*, Spandana Publications, Bangalore
9. Nanjundappa D.M. *Same Aspects of Karnataka Economy*.
10. Puttaswamiah K. *Karnataka Economy*, Two Volumes

GROUP-3 [Paper-1]

B.A. Cognate Subject: Economics

V-SEMESTER

Code No: Econ. DSE-1.A (iii) [L: 2 + T: 1 = 3 Credits Per Week]

7.3: ECONOMICS OF NATURAL RESOURCES

Module-1: Introduction

Meaning and Importance of Natural Resources - Natural Resources and Development - Natural Resources and Sustainable Development

Module-2: Theories of Exhaustible Resources

Contribution of Adam Smith, David Ricardo, Alfred Marshall and Hotelling Theory of Exhaustible Resources

Module-3: Natural Resources: An Overview

Natural Resources and their Classification : Renewable and Non-Renewable Resources - Land, Water, Minerals and Forest as Resources - Impact of Economic Activity on Natural Resources - Importance of Conservation of Natural Resources - Water Management.

Module-4: Energy and Environment

Impact of Energy Production and Consumption on Environment - Problems and Depletion of Energy Resources - Alternative Sources of Energy - Development of Renewable Energy Resources - Importance of Energy Conservation

Module-5: Common Property Resources

Common Property Resources and other Local Resources - Community Participation in the Protection of Common Property Resources

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Exposure to Natural Resources, Visit to River Belts, Mineral Sites, Forests, Water Management Sites, Discussion on the Depletion of Resources, Alternative Energy Sources, Common Property Resources, Energy Conservation Methods etc., (ANY ONE)

References:

1. Engine. *Environmental Economics,* Vrinde Publications Pvt., Ltd, New Delhi.
2. Karpagam M. *Environmental Economics,* Sterling Publishers Pvt. Ltd, New Delhi.
3. Rajalakshmi and Dulasi Brinda. *Environmental Economics,* New Age International Publisher, New Delhi.
4. Sankaran S. *Environmental Economics,* Margham Publications, Madras.
5. Turver R. Kerry, David Pearce and Van Bateman. *Environmental Economics-An Elementary Introduction,* The Johns Hopkins University Press, Baltimore.

GROUP-3 [Paper-2]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-1.B (iii) [L: 2 + T: 1 = 3 Credits Per Week]

8.3: ENVIRONMENTAL ECONOMICS

Module-1: Introduction

Importance of the Study of Environmental Economics - Relationship between Environment and Economic Development- Sustainable Development

Module-2: Pollution and its Impact on the Environment

Meaning and Definitions of Pollution - Air, Water and Noise Pollution - Causes, Consequences and Methods to Control Pollution - Pollution and Externalities - Divergence between Social Cost and Private Cost

Module-3: Population and Environment

Trends in Global Population - Impact of Population Growth on Environment - Urbanization and its Problems.

Module-4: Local Environment Problems and Global Environmental Problems

Municipal Solid Waste Management, Economics of Recycling, People's Participation in Controlling Local Environment Problems - Global Environmental Problems - Global Warming, Green House Effect, Ozone Depilation, Threat to Biodiversity, e-Waste Management.

Module-5: Environmental Policies in India

India's Environmental Policy - Role of Pollution Control Board - Constitutional Provisions for Environmental Protection and Legal Measures.

Field Activity

Importance of Field Activity - Preparation of Field Activity Report

Visit to sites with Water Pollution, Air Pollution and Noise Pollution, Slums, Exposure to Pollution in Agriculture, Industry, Transportation sector, Urbanization and Urban Problems, Pollution Control Boards, Waste Management Sites. (ANY ONE)

References:

1. Turner R. Kerry, David Pearce, & Ian Bateman. *Environmental Economics - An Elementary Introduction*, The Johns Hopkins University Press, Baltimore
2. Sankaran S. *Environmental Economics*, Margham Publications, Madras
3. Engine T. *Environmental Economics*, Vrinda Publications (P) Ltd, New Delhi
4. Karpagam. *Environmental Economics*, Sterling Publishers Pvt Ltd, New Delhi.
5. Rajalakshmi and Dulasi Brinda. *Environmental Economics*, New Age International Publishers, New Delhi.

GROUP-4 [Paper-1]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-2.B (iv) [L: 2 + T: 1 = 3 Credits Per Week]

7.4: INDIAN ECONOMIC THOUGHT

Module- 1: Ancient and Medieval Period

Economic Thought in Ancient and Medieval India - a Brief Analysis of Kautilya's Arthashastra: Economic Functions of the State, Taxation and Pricing Policy and Land Revenue System.

Module- 2: Economic Thinkers in India

Dadabh Navaroji: the Drain Theory
Mahadev Govind Ranade: Poverty and Industrialization, Agrarian Policy, Railway and Investment,
R.C. Dutt: Economic Growth
Sir Visvesvaraya: Rural Development, Planning and Industrialization

Module- 3: Gandhian Economic Thought

Mahatma Gandhi: Swadeshi Technology, Sarvodhaya, Trusteeship and Industrial Relations.

Module- 4: Socialist Economic Thinkers in Modern India

Jawaharlal Nehru: Planning, Heavy Industries
B.R. Ambedkar: Provincial Finances - Small Holdings - State Socialism,
Ram Manohar Lohia: Socialist Ideas.

Module- 5: Planning Economic Growth and Rural Development

D.R Gadgil: Planning, Decentralization.
P.C. Mahalanobis: Planning Model
V.K.R.V.Rao: National Income Estimate
C.N.Vakil and P.R.Brahmananda: Wage Goods Model,
Amartya Sen: Poverty and Famine; Views on Economic Development - Human Capabilities Approach.

Activity

Writing a Biographical Note on any one of the Economist listed in the syllabus and presenting it in the class.

References:

1. Babatosh Dutta. *Indian Economic Thought: Twentieth Century Perspectives,* Tata Mc Graw Hill, New Delhi.
2. Indian Economic Association, Conference Volumes (Various Issues)
3. Srivastava S.K. *History of Economic Though*, S. Chand and Co., Ltd, New Delhi.

GROUP-4 [Paper-2]

B.A. Cognate Subject: Economics

VI-SEMESTER

Code No: Econ. DSE-1.B (iv) [L: 2 + T: 1 = 3 Credits Per Week]

8.4: BASIC ECONOMETRICS

Module-1: The Linear Regression

Basic Ideas of Linear Regression Model - Two Variable Model - Population Regression Function (PRF) - Sample Regression Function(SRF) - Classical Linear Regression Model- Method of Ordinary Least Square (OLS) - Properties OLS Method - Gauss-Markov Theorem - Hypothesis Testing - Test of Goodness of Fit (R^2) and Corrected R^2 - Normality Tests and Standard Error Test.

Module-2: Multiple Regression Analysis

Estimation and Hypothesis Testing - Assumption of Multiple Linear Regression Model, Three Variable Linear Regression Model, Partial Regression Coefficient, Estimation of Parameters of Multiple Regression, Determination of R^2 and Standard Error, Comparing Two R^2 Values and Adjusted R^2. Introduction to Matrix Approach to Estimation of Parameters of More Than Three Variables

Module-3: Maximum Likelihood Estimators

Properties of Maximum Likelihood Estimates

Module-4: Special Problems in Single Equation Linear Models

Multicolinearity - Nature, Consequences and Remedial Measures
Heteroscedasticity- Nature, Consequences, Detection and Remedial Measure

Autocorrelation - Nature, Consequences and Remedial Measures

References:

1. Damodar Gujarati, and Dawn C Porter, Sangeetha Gunasekar. *Basic Econometrics*, McGraw Hill International Student Edition.
2. Damodar Gujarati. (1998) *Essentials of Econometrics*, McGraw Hill International Edition
3. Koutsoyiannia A. *Theory of Econometrics*, Palgrave, Delhi, 2001.
4. Sukesh K Ghosh. (1994) *Econometrics - Theory and Applications*, Prentice Hall of India Private Limited, New Delhi.

Telephone No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC6/451/2016-17

Dated: 03.10. 2018

REVISED NOTIFICATION

Sub: Revision of Syllabus of BBA from the academic year 2018-19.

Ref: 1. Decision of the Board of Studies in Business Administration (UG) held on 20-12-2017, 21-12-2017 & 28-02-2018.
2. Decision of the Faculty of Commerce Meeting held on 19-04-2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.
4. University notification no. AC6/28/2018-19 dated 15th June 2018.
5. Decision of the Academic council meeting held on 15-09-2018.

*****

The Board of Studies in BBA which met on 10th September, 2018 has recommended to revise the BBA course syllabus and scheme of examination as per CBCS pattern from the academic year 2018-19.

The Academic Council at its meeting held on 15th September 2018 has also approved the above said proposal and the same is hereby notified.

The University notification cited under reference (4) has been withdrawn.

The Revised syllabus is annexed herewith and the contents may be downloaded from the University Website i.e., www.uni-mysore.ac.in

3/10/18

DEPUTY REGISTRAR(ACADEMIC)

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Commerce, B.N. Bahadur Institute of Management Sciences, Manasagangotri, Mysuru.
3. The Chairman, B.N. Bahadur Institute of Management Sciences, Manasagangotri, Mysuru.
4. The Chairman, Board of Studies in Business Administration, B.N. Bahadur Institute of Management Sciences, Manasagangotri, Mysuru.
5. All the Principals of Affiliated College running BBA Programme.
6. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB & EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysore.
9. Office Copy.

UNIVERSITY OF MYSORE

Proposed CBCS Regulations for Bachelor of Business Administration (B B A)

Regulations - 2018

NOTE:

1. These regulations are applicable to students taking admission to I semester BBA from the academic year 2018-19
2. The duration of the course shall be 3 years consisting of 06 semesters.
3. Each semester shall extend over a minimum period of SIXTEEN weeks teaching duration.

1.0 NAME OF THE PROGRAM AND ITS DURATION

Bachelor of Business Administration (B B A)

The duration of the BBA course shall be of 03 years of 06 semesters. A candidate shall complete his/her degree within 06 academic years from the date of admission to the course

2.0 ELIGIBILITY FOR ADMISSION

Students who have passed Pre-University Examination (10+2) or equivalent examination in any discipline are eligible for admission.

3.0 SCHEME OF INSTRUCTIONS:

In each of the first four semesters, there shall be 6 courses from AECC and DSC. In each of the last two semesters, there shall be 6 courses from DSC, SEC and DSE. For each course, there shall be lecture classes, tutorials/practicals. The credits for each course varies between 2 and 5 credit per course per week as prescribed in the curriculum.

Credits Matrix:

Course Type		Total credits
DSC	10 courses ×5Credits + 9 courses ×4Credits	**50+36= 86**
DSE	04 courses × 5Credits	**20**
SEC	02 courses × 4Credits	**8**
AECC	10 courses ×3 Credits +1 Course ×2 Credits	**32**
Total courses (36 courses)		**146**

4.0 SCHEME OF EXAMINATION AND EVALUATION:

There shall be university examination at the end of each semester for maximum marks of 80 for Theory examination and the Continues Assessment will be for 20 marks.

In case of courses less than 3 credits term end examination will be for 40 marks and Continues Assessment is for 10 marks.

All courses of this program except courses that are common to all other graduate program of the University of Mysore shall be set/valued/reviewed by BOE of Management for a maximum of 80 marks. The pattern of question paper will be as follows:

Part- A: Answer any two out of four questions.	2*15= 30
Part- B : Answer any three out of five questions.	3*10= 30
Part- C : Answer any four out of six questions.	4*05=20
TOTAL	**80**

Evaluation of each course is divided into continuous assessment (CA) and end term examination with marks allocated as shown in the table.

Scheme of Assessment

Course Type	C1	C2 (Including ABFR)	C3		Total
	Marks	Marks	Marks	Duration (Hrs)	
DSC	10	10	80	3	100
SDE	10	10	80	3	100
SEC	10	10	80	3	100
Project Work	30	30	40	3	100
AECC	10	10	80	3	100

Continues Assessment will be carried out in two stages: One, after eight weeks of instructions designated as C1, C2 is the preparation of Activity Based Filed Report. In each semester, students shall carry out field/factory visits and collect data (primary/secondary) on an activity pertaining to the subject in consultation with the concerned teacher called Activity Based Field Report (ABFR). The ABFR shall be submitted before the sixteenth week of the semester to the concerned teacher, who in turn will evaluate and submit the marks list along with C1 and C2 marks. The end of term examination designated as C3 will be held between eighteenth and twentieth weeks of the semester.

Continuous assessment may be through Activity Based Field Report, announced and surprise tests, term papers / seminars / quizzes / case discussions, viva, and practicals.

The breakup of marks will be as follows:

a. C1(Covering the first half of the syllabus)	-10 Marks
b. C2(Activity Based Field Report)	-10 Marks
c. C3 (Covering entire syllabus)	-80 Marks
	Total =100 Marks

Term end examination (C3) will be of 3 hours duration for each course.

Evaluation of Project Report

Evaluation of Project Report is for 100 marks divided into three components.

a) C1 (Finalization & Preparation of Synopsis) -30 Marks
b) C2 (Submission of detailed work dairy) -30 Marks
c) C3 (Final Project Report) -40 Marks

5.0 ATTENDANCE:

- Each semester shall be taken as a unit for the purpose of calculating attendance and a student shall be considered to have put in the required attendance for that semester if the candidate has attended not less than 75% of the number of working days (lectures during each semester)
- A candidate who does not satisfy the requirement of attendance shall not be eligible to take the examination of the concerned semester.
- A candidate who fails to satisfy the requirement of attendance in a semester shall re-join the same semester by obtaining prior permission from the University.

6.0 MEDIUM OF INSTRUCTION:

The medium of instruction shall be English.

7.0 APPEARANCE FOR THE EXAMINATION:

A candidate shall apply for all the courses of a semester when he appears for examination of each semester for the first time.

8.0 BOARD OF EXAMINERS, VALUATION:

- There shall be a Board of Examiners for scrutinizing and approving the question papers and scheme of valuation constituted by the University.
- There will be single valuation for all the courses.

9.0 DECLARATION OF RESULT:

- Minimum for a pass in each course shall be 30%, and for all the courses in the semester average shall be 40%. However, a candidate has to score minimum of 30% of theory component of semester end examination i.e. 24(rounded off) marks out of 80 marks.
- There shall be no minimum marks for C1 and C2.
- Classification of successful candidates and Gradation of results shall be as per the University regulations as shown below;

Letter grade	Grade point
O (Outstanding)	10
A+(Excellent)	9
A (Very Good)	8
B+(Good)	7
B (Above Average)	6
C (Average)	5
P (Pass)	4
F (Fail)	0
Ab (Absent)	0

10.0 PROVISION FOR REPEATERS:

- A candidate is allowed to carry all the previous un-cleared programme/s to the subsequent semester/s.
- The candidate shall take the examination as per the syllabus and scheme of examination in force during the subsequent appearances.
- **PROVISION FOR RE-ADMISSION**:
- Such of those candidates who have discontinued the course/failed to take admission to the next semester, shall get admitted to the concerned semester in the immediate next academic year only. This provision is available to a student only two times in the entire duration of the course.
- **Any other issue not envisaged above** shall be resolved by the Vice Chancellor in consultation with the appropriate bodies of the University which shall be final and binding.
- Wherever the regulation is silent, the provisions of University CBCS regulations shall be applicable.

11.0 DETAILS OF B BA SUBJECTS AND SYLLABUS

Sl No.	COURSES Type	Course	Credits	L:T:P Pattern	Work hours per week
		I Semester			
1.1	AECC	Kannada-1/Sanskrit/Urdu/Tamil/ Telugu//Marathi/Hindi	3	2:1:0	4
1.2	AECC	English-1	3	2:1:0	4
1.3	DSC-1	Financial Accounting -I	5	4:1:0	6
1.4	DSC-2	Principles of Management	4	3:1:0	5
1.5	DSC-3	Business Environment	4	3:1:0	5
1.6	AECC	Environmental studies	3	2:1:0	4
			22		28hrs
		II Semester			
2.1	AECC	Kannada-2/Sanskrit/Urdu/Tamil/Telugu/Marathi/Hindi	3	2:1:0	4
2.2	AECC	English-2	3	2:1:0	4
2.3	DSC-4	Business Decision Theories	4	3:1:0	5
2.4	DSC-5	Management of Services	4	3:1:0	5
2.5	DSC-6	Financial Accounting - II	5	4:1:0	6
2.6	AECC	Constitution of India	3	2:1:0	4
			22		28hrs
		III Semester			
3.1	AECC	Kannada-3/Sanskrit/Urdu/Tamil/ Telugu/ /Marathi/Hindi	3	2:1:0	4
3.2	AECC	Business Communication-I(English – 3)	3	2:1:0	4
3.3	DSC-7	Management Information System	4	2:0:2	6
3.4	DSC-8	Financial Accounting-III	5	4:1:0	6
3.5	DSC-9	Cost Accounting	5	4:1:0	6
3.6	AECC	Disaster Management	2	2:0:0	2
			22		28hrs
		IV Semester			
4.1	AECC	Kannad-4/Sanskrit/Urdu/Tamil/ Telugu//Marathi/Hindi	3	2:1:0	4
4.2	AECC	Business Communication-II (English – 4)	3	2:1:0	4
4.3	DSC-10	Quantitative Techniques	5	4:1:0	6
4.4	DSC-11	Commercial Law	4	3:1:0	5
4.5	DSC-12	Organizational Behaviour	4	3:1:0	5
4.6	DSC-13	Management Accounting	5	4:1:0	6
			24		30hrs
		V Semester			
5.1	DSC-14	Company Law	4	3:1:0	5
5.2	DSC-15	Business Statistics-I	5	4:1:0	6
5.3	DSC-16	Tax Management-I	5	4:1:0	6
5.4	SEC-1	Business Research Methods / Project Management [1]	4	3:1:0	5
	SEC-1			3:1:0	5
5.5	DSE-1	Elective-I(MM/HRM/FM/B&I/TM)	5	4:1:0	6
5.6	DSE-2	Elective-II (MM/HRM/FM/B&I/TM)	5	4:1:0	6
			28		39hrs
		VI Semester			
6.1	DSC-17	Entrepreneurship and Small Business Management	4	3:1:0	5
6.2	DSC-18	Business Statistics-II	5	4:1:0	6
6.3	DSC-19	Tax Management-II	5	4:1:0	6
6.4 A	SEC-2 SEC-2	Business Policy / Project Report[2]	4	3:1:0	5
6.4 B				0:2:2	8
6.5	DSE-3	Electives-III(MM/HRM/FM/B&I/TM)	5	4:1:0	6
6.6	DSE-4	Elective-IV(MM/HRM/FM/B&I/TM)	5	4:1:0	6
			28		**42hrs**

Total: **146 credits**

DSC = Discipline Specific Course **SEC = Skill Enhancement Courses DSE = Discipline Specific Elective** **AECC = Ability Enhancement Compulsory Courses**

* Any one of the languages from Kannada/Sanskrit/Urdu/Tamil/Telugu//Marathi//Hindi/French/German/Persian/Arabic

12.0 Elective Groups

1. Marketing Management:
   Elective I: **Principles of Marketing**
   Elective II: **Rural Marketing and Consumer Behaviour**
   Elective III: **Advertising**
   Elective IV: **Retail and Supply Chain Management**

2. **Human Resource Management**
   Elective I: **Human Resource Management**
   Elective II:**Human Resource Development**
   Elective III:**Performance Appraisal and Compensation Management**
   Elective IV: **Employee Empowerment and Industrial Relations**

3. **Financial Management:**
   Elective I: **Financial Management**
   Elective II: **Working Capital Management**
   Elective III: **Financial Services**
   Elective IV: **Investment Analysis and Portfolio Management**

4. **Tourism Management**
   Elective I: **Fundamentals of Tourism**
   Elective II:**Tourism Planning and Organisation**
   Elective III:**Tourism Management**
   Elective IV:**Tourism Marketing**

5. **Banking and Insurance**
   Elective I: **Indian Banking System**
   Elective II: Banking Information Technology
   Elective III: Principles of Insurance
   Elective IV: General Insurance

Instructions

1. In the fifth semester candidate can choose between Business Research Methods and Project Management.
2. In the sixth semester the candidate can choose between Corporate Governance and Project Report.
3. In the fifth and sixth semester the candidate should choose the papers from the elective group.
4. In the fifth and sixth semester the choice will be offered for a minimum strength of 20 students.
5. The project report shall be in the elective group chosen.
6. Project Report Guidance
   - Project Reports are to be prepared on problem/issues related to business or industry or functioning organisations under the guidance of senior teacher.
   - Guiding ten students in project work will be considered equivalent to teaching three credits course.

III SEMESTER

ABILITY ENHANCEMENT COMPULSORY COURSE 3.6

DISASTER MANAGEMENT

LTP 2:0:0 **2 Hours per week**

Objectives: To familiarize students with the Disaster Management skills to enable them deal with manmade and natural disasters striking mankind

UNIT-1-Introduction to Disasters: Concepts, and definitions (Disaster, Hazard, Vulnerability, Resilience, Risks) . Disasters: Classification, Causes, Impacts (including social, economic, political, environmental, health, psychosocial, etc.) Differential impacts- in terms of caste, class, gender, age, location, disability Global trends in disasters, urban disasters, pandemics, complex emergencies, Climate change

UNIT-2-. Approaches to Disaster Risk reduction: Disaster cycle - its analysis, Phases, Culture of safety, prevention, mitigation and preparedness community based DRR, Structural- nonstructural measures, roles and responsibilities of- community, Panchayati Raj Institutions/Urban Local Bodies (PRIs/ULBs), states, Centre, and other stake-holders.

UNIT-3-Inter-relationship between Disasters and Development: Factors affecting Vulnerabilities, differential impacts, impact of Development projects such as dams, embankments, changes in Land-use etc. Climate Change Adaptation. Relevance of indigenous knowledge, appropriate technology and local resources

UNIT-4- Disaster Risk Management in India Hazard and Vulnerability profile of India Components of Disaster Relief: Water, Food, Sanitation, Shelter, Health, Waste Management Institutional arrangements (Mitigation, Response and Preparedness, DM Act and Policy, Other related policies, plans, programmes and legislation)

Books for reference

1. Gupta Anil K, Sreeja S. Nair.
2. 2011 Environmental Knowledge for Disaster Risk Management,
3. NIDM, New Delhi Indian Journal of Social Work 2002.
4. Special Issue on Psychosocial Aspects of Disasters, Volume 63, Issue 2, April.
5. Kapur, Anu & others, 2005: Disasters in India Studies of grim reality, Rawat Publishers, Jaipur
6. Kapur Anu 2010: Vulnerable India: A Geographical Study of Disasters, IIAS and Sage Publishers, New Delhi.

Telephone No. 2419677/2419361
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No.AC6/451/2016-17

Dated: 03.10. 2018

REVISED NOTIFICATION

Sub: Revision of Syllabus of B.Com. from the academic year 2018-19.

Ref: 1. Decision of the Board of Studies in Commerce (UG) held on 14-12-2017 & 02-03-2018.
2. Decision of the Faculty of Commerce Meeting held on 19-04-2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.
4. University notification no. AC6/28/2018-19 dated 15th June 2018.
5. Decision of the Academic council meeting held on 15-09-2018.

*****

The Board of Studies in Commerce which met on 11th September, 2018 has recommended to revise the B.Com course syllabus and scheme of examination as per CBCS pattern from the academic year 2018-19.

The Academic Council at its meeting held on 15th September 2018 has also approved the above said proposal and the same is hereby notified.

The University notification cited under reference (4) has been withdrawn.

The Revised syllabus is annexed herewith and the contents may be downloaded from the University Website i.e., www.uni-mysore.ac.in

3/10/18

DEPUTY REGISTRAR(ACADEMIC)

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Commerce, B.N. Bahadur Institute of Management Sciences, Manasagangotri, Mysuru.
3. The Chairman, Department of Studies in Commerce, Manasagangotri, Mysuru.
4. The Chairman, Board of Studies in Commerce(Graduate), Manasagangotri, Mysuru.
5. All the Principals of Affiliated College running Bachelor of Commerce (Graduate) Programme.
6. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB & EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysore.
9. Office Copy.

REVISED CBCS GUIDELINES FOR B.COM COURSE

The followings changes have been made to the CBCS guidelines for B Com course;

1. One hour of lecture is equal to one credit and two hours of tutorials/practical's is equal to one credit. Accordingly, the work load in Discipline specific course, Skill Enhancement course and Discipline specific Electives has been revised.
2. The Revised work load shall be as under for Discipline specific course, Skill Enhancement course and Discipline specific Electives;
3. REVISED COURSE STRUCTURE:

SEM	Sl No	Course	Subjects	Hrs Per week	Credit	LTP
I	1.1	AECC	Kannada/Sanskrit/Hindi/Urdu/ Tamil /Telugu/Marathi	04	03	2:1:0
	1.2	AECC	English -1	04	03	2:1:0
	1.3	DSC-1	Business Management	06	05	4:1:0
	1.4	DSC-2	Financial Accounting	06	05	4:1:0
	1.5	DSC-3	Management of Banking and Insurance Services	05	04	3:1:0
	1.6	AECC	Environmental studies/ Constitution of India	04	03	2:1:0
			TOTAL FOR THE I SEMESTER	29	23	
II	2.1	AECC	Kannada/Sanskrit/Hindi/Urdu/ Tamil /Telugu/Marathi	04	03	2:1:0
	2.2	AECC	English -2	04	03	2:1:0
	2.3	DSC-4	Cost Accounting	06	05	4:1:0
	2.4	DSC-5	Financial accounting II	06	05	4:1:0
	2.5	DSC-6	Principles of Marketing	05	04	3:1:0
	2.6	AECC	Environmental studies/constitution of India	04	03	2:1:0
			TOTAL FOR THE II SEMESTER	29	23	
III	3.1	AECC	Kannada/Sanskrit/Hindi/Urdu/ Tamil /Telugu/Marathi	04	03	2:1:0
	3.2	AECC	English-3	04	03	2:1:0
	3.3.	DSC-7	Corporate Accounting I	06	05	4:1:0
	3.4	DSC-8	Income Tax – I	06	05	4:1:0
	3.5	SEC-1	SEC-ANY ONE FROM GROUP-A	05	04	3:1:0
	3.6	AECC	Disaster Management	02	02	2:0:0
			TOTAL FOR THE III SEMESTER	27	22	

IV	4.1	AECC	Kannada/Sanskrit/Hindi/Urdu/ Tamil /Telugu/Marathi	04	3	2:1:0
	4.2	AECC	English-4	04	3	2:1:0
	4.3	DSC-9	Corporate Accounting II	06	5	4:1:0
	4.4	DSC-10	Income Tax – II	05	4	3:1:0
	4.5	DSC-11	Quantitative Techniques	06	5	4:1:0
	4.6	SEC-2	SEC-ANY ONE FROM GROUP-A	05	4	3:1:0
			TOTAL FOR THE IV SEMESTER	30	24	
V	5.1	DSC-12	Entrepreneurship Development	5	4	3:1:0
	5.2	DSC-13	IFRS (IND-AS)	5	4	3:1:0
	5.3	SEC-3	SEC(Any One From - Group-A)	5	4	
	5.4	DSE-1	Elective-I(Any One From Group-B)	6	5	4:1:0
	5.5	DSE-2	Elective-II (Any One From Group-B)	6	5	4:1:0
	5.6	DSE-3	Elective-III-(Any One From Group-B)	6	5	4:1:0
			TOTAL FOR THE V SEMESTER	33	27	
VI	6.1	DSC-14	Principles and Practice of Auditing	5	4	3:1:0
	6.2	DSC-15	Business laws	5	4	3:1:0
	6.3	SEC-4	SEC(Any One From Group-A)	5	4	
	6.4	DSE-4	Elective-I(Any one from Group-C)	6	5	4:1:0
	6.5	DSE-5	Elective-II (Any one from Group-C)	6	5	4:1:0
	6.6	DSE-6	Elective-III-(Any one from Group -C)	6	5	4:1:0
			TOTAL FOR VI SEMESTER	33	27	
			GRAND TOTAL FOR THE COURSE		146	

SCHEME OF EXAMINATION AND EVALUATION:

1. There shall be university examination at the end of each semester for maximum marks of 80, and the Internal Assessment will be conducted for 20 marks.
2. All Question papers of B Com course, except papers that are common to all other graduate courses of the University of Mysore, shall be set/valued/reviewed by BOE of commerce for a maximum of 80 marks. The pattern of question paper will be as follows:

Part- A: Answer any four out of six questions; each question carries 5 marks 4*5=20
Part- B: Answer any three out of five questions; each question carries 10 marks 3*10=30
Part- C: Answer any two out of four questions; each question carries 15 marks 2*15=30

TOTAL 80

Evaluation of each subject is divided into internal assessment (IA) and semester end examination with marks allocated as stated above. Internal assessment shall be carried out in two stages: first internal assessment C1 after the eight weeks of instructions, Second Internal assessment C2 after sixteen weeks of instruction. IA marks shall be awarded on the basis of continuous assessment that includes tests, seminars, case discussions, field study and Viva-voce.

The semester end examination C3 will be held as per the examination schedule of the University of Mysore.

3. An industrial visit shall be organized for the B Com students in order to make them acquaint with the first hand knowledge of working of industrial and other commercial establishments.

Tel. No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC.2(S)/31/18-19 Dated: 24.07.2018

NOTIFICATION

Sub: Minor modifications in the syllabus for B.Sc. V & VI semester and soft skill paper for Computer Science (UG) from the Academic year 2018-19.

Ref: 1. Decision of Board of Studies in Computer Science (UG) meeting held on 28.02.2018.
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.
3. Decision of the Academic council meeting held on 19.06.2018.

*****

The Board of Studies in Computer Science (UG) which met on 28.02.2018 has recommended to make minor changes in the syllabus of V & VI semester of B.Sc. Computer Science and also in Soft Skill paper from the academic year 2018-19.

The Faculty of Science and Technology and Academic Council meeting held on 21.04.2018 and 19.06.2018 respectively have approved the above said proposal and the same is hereby notified.

The modified syllabus of V and VI semesters for B.Sc. Computer Science course and soft skill paper is annexed. The contents may be downloaded **from the University Website i.e., www.uni-mysore.ac.in**.

Draft approved by the Registrar

Sd/-
Deputy Registrar(Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Computer Science, Manasagangotri, Mysore.
3. The Chairperson, BOS in Computer Science, DOS in Computer Science, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Computer Science, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
8. Office file.

Sl. No.	Course / Paper	Existing	Modified
1.	V Semester B.Sc.		
	Paper 7(a): C++ Lab	Practical: 2 Hours per week	Practical: 3 Hours per week
	Paper 7(b): Web Designing Lab	Practical: 2 Hours per week	Practical: 3 Hours per week
2.	VI Semester B.Sc.		
	Paper 10(a): DOT(.)Net Lab	Practical: 2 Hours per week	Practical: 3 Hours per week
	Paper 10(b): Numerical Algorithms Lab	Practical: 2 Hours per week	Practical: 3 Hours per week
3.	IV Semester B.Sc.[Non-Computer Science Students] and B.A. Subsidiary Paper: Computer Application	Theory: 2 Hours per week Tutorial: 2 Hours per week	Theory: 4 Hours per week
4.	BCA and B.Sc.(CS) (Any Semester) Univ. Ref. No.: AC.2(S)/384/14-15 dated 01-06-2016. Paper: Soft Skill	Theory: 1 Hour per week Practical: 3 Hours per week Maximum Marks: 50 Internal Marks: 20 Practical Examination: 30	Theory: 1 Hour per week Practical: 3 Hours Per week Maximum Marks: 100 Theory Examination: 50 Internal Marks: 20 Practical Examination: 30 (Procedure – 15 Implementation – 10 Viva – 5)

Telephone No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC6/32/2018-19

Dated: 15th June 2018

NOTIFICATION

Sub: Revision of Language and optional English (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

Ref: 1.Decision of the Board of Studies in English (UG) held on 05-03-2018.
2. Decision of the Faculty of Arts Meeting held on 20-04- 2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.

*****

The Board of Studies in English (UG) which met on 05th March 2018 has recommended to revise the Language and optional English (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

The Faculty of Arts and the Deans Committee held on 20-04-2018 and 22.05.2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The contents may be downloaded from the University Website i.e., www.uni-mysore.ac.in

Deputy Registrar (Academic)

Draft Approved by the Registrar

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Arts, Department of Studies in English,Manasagangotri, Mysuru.
3. The Chairman, Department of Studies in English, Manasagangothri, Mysuru.
4. The Chairman, Board of Studies in English, (UG) Manasagangotri, Mysuru.
5. All the Principals of Affiliated/Constituent College running , Graduate Programme.
6. The Director, College Development Council, MoulyaBhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB and EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysuru.
9. Office Copy.

University of Mysore

Undergraduate Courses – CBCS

2018-19

ENGLISH

Contents:

Syllabus; Distribution of Teaching Hours; C1 and C2 Assessment Methods; and

Question Paper Pattern for C3

of

a) Language English – AECC
b) Communicative English – SEC-1
c) GE-1 and GE-2
d) Optional English – DSC and DSE

Prepared by

The Board of Studies – English (UG), University of Mysore, Mysuru

Professor Mahadeva Department of Studies in English Manasagangotri University of Mysore, Mysuru	Chairman
Dr. K Yeshoda Nanjappa Department of English, Yuvaraja's College University of Mysore, Mysuru	Member
Dr. P Venkatesh Department of English, Maharaja's College University of Mysore, Mysuru	Member
Dr. Suma Embar Department of English, Government First Grade College Kuvempunagar, Mysuru	Member
Prof. Gavin Jude Wilson Department of English, Maharaja's College University of Mysore, Mysuru	Member
Dr. S Siraj Ahmed Department of English, Sahyadri Arts College Kuvempu University, Shimoga	External Member

English Syllabus for Undergraduate Courses of the University of Mysore

CBCS: 2018-19

Language English

AECC – Ability Enhancement Compulsory Courses

Language English for Faculty of Arts and Faculty of Science

Semester	Course	Title of the Paper	L-T-P	Credits
I	Eng-1	*Semiosis – I*	2-1-0	3
II	Eng-2	*Semiosis – II*	2-1-0	3
III	Eng-3	*Untouchable* and Language Component	2-1-0	3
IV	Eng-4	*Julius Caesar* and Language Component	2-1-0	3

Language English for Faculty of Commerce and Faculty of Business Administration

Semester	Course	Title of the Paper	L-T-P	Credits
I	Eng-1	*Intellection – I*	2-1-0	3
II	Eng-2	*Intellection – II*	2-1-0	3
III	Eng-3	*The Financial Expert* and Language Component	2-1-0	3
IV	Eng-4	Business Correspondence, *Refund* and Language Component	2-1-0	3

Note:

i. A tutorial hour in the L-T-P module of CBCS is a session where the teacher initiates students to participate actively in learning to have experiences of learning. The L-T-P module is adopted for Language English classes in the pattern 2-1-0 (3 Credits)

ii. 2 Lecture hours = 2 Credits; 1 Tutorial hour = 0.5 Credit

iii. There will be 2 Lecture hours and 2 Tutorial hours for all Language English students, which means 3 Credits

iv. 1 Tutorial hour is considered 1 Teaching hour;
2 Lecture hours + 2 Tutorial hours = 4 Teaching hours

v. Lecture hours are for Poetry/Prose/Novel/Play and Tutorial hours are for Language Component and Literary Activities such as debates and discussions, invited lectures and presentations, English language songs and readings, film viewings, quizzes, skits, poster making, collage and so on (individual teachers and departments can chalk out activities)

SEC and GE offered by the Department of English

SEC – Skill Enhancement Course

Communicative Skills for Faculty of Arts

Semester	Course	Title of the Paper	L-T-P	Credits
III	SEC-1	Communicative Skills	2-0-0	2

GE – Generic Elective

Course for students of an unrelated discipline/subject

Semester	Course	Title of the Paper	L-T-P	Credits
V	GE-1	Appreciating Short Stories	2-0-0	2
VI	GE-2	Appreciating Novellas	2-0-0	2

DSC and DSE – Optional English: Faculty of Arts

DSC – Discipline Specific Course

Semester	Course	Title of the Paper	L-T-P	Credits
I	DSC-A	Introduction to Literature	6-0-0	6
II	DSC-B	Indian Writing in English	6-0-0	6
III	DSC-C	Elizabethan Theatre	6-0-0	6
IV	DSC-D	Victorian Fiction	6-0-0	6

DSE – Discipline Specific Elective

(Choice between i and ii in both V and VI Semesters)

Semester	Course	Title of the Paper	L-T-P	Credits
V	DSE-A	i. Twentieth Century British and American Literatures **OR** ii. Literary Criticism and Practical Criticism	6-0-0 6-0-0	6
VI	DSE-B	i. New Literatures in English **OR** ii. Postcolonial Critical Essays	6-0-0 6-0-0	6

Language English Syllabus – CBCS

From the Academic Year 2018-19

For Undergraduate Programs Offered in Faculty of Arts and Faculty of Science

I Semester: Eng-1 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

Semiosis – I

Introduction: The Paper introduces some of the most delightful and instructive poems and prose pieces in English to the students beginning their undergraduate course. The literary texts in the Paper provide powerful contexts to understand human situations in our world and show how they are expressed in English language. The five units of the Language Component strengthen the student's English vocabulary and understanding of English sentence structure. C1 and C2 components, which consist of Test and Assignment, ensure that the students are learning well and prepare them for C3, the semester exam; the one-mark, five-marks and ten-marks questions in the examination are designed to evaluate language comprehension and textual understanding.

Poetry (1 Lecture hour per week):

1. The Oxford Clerk – Geoffrey Chaucer
2. Shall I Compare Thee – William Shakespeare
3. Sparkles from the Wheel – Walt Whitman
4. Where the Mind is without Fear – Rabindranath Tagore
5. The Tiger and the Deer – Sri Aurobindo

Prose (1 Lecture hour per week):

1. Toba Tek Singh – Saadat Hasan Manto
2. The Clay Mother-in-law: A South Indian Folktale (Collected by A. K. Ramanujan)
3. On the Way to Goregaon – B. R. Ambedkar

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Homophones (Words often confused)
2. Articles
3. Verbs in relation to tense, person and number of the subject
4. Prepositions (of place, time, position)
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from poetry and prose to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 2 annotations out of 4 from poems (2x5=10 marks)
C. 2 essay type questions out of 4 from poems (2x10=20 marks)
D. 2 essay type question out of 3 from prose (2x10=20 marks)
E. Language Component: (5x4 = 20 marks)

II Semester: Eng-2 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

Semiosis – II

Introduction: The students who are now familiar with the two important forms of literature – poetry and prose – explore more in these forms, which come with a slightly higher level of difficulty in this Paper. The literary pieces here deal with life in its varied hues most tellingly. The Language Component addresses the importance of achieving clarity in speaking and writing. C1, C2 and C3 goals are the same as in the previous semester.

Poetry (1 Lecture hour per week):

1. On His Blindness – John Milton
2. Sower – Victor Hugo (Translated by Toru Dutt)
3. Once upon a Time – Gabriel Okara
4. I am not that Woman – Kishwar Naheed
5. Remembrance – Mamang Dai

Prose (1 Lecture hour per week):

1. Pepe – Maxim Gorky
2. My Greatest Olympic Prize – Jesse Owens
3. Letters from *The Diary of a Young Girl* – Anne Frank

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Punctuation (capitalization, comma, period, question mark, exclamation mark, quotation marks and apostrophe)
2. Framing Questions (with wh-words & yes/no questions)
3. Use of Negatives
4. Linkers (Conjunctions)
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from poetry and prose to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 2 annotations out of 4 from poems (2x5=10 marks)
C. 2 essay type questions out of 4 from poems (2x10=20 marks)
D. 2 essay type question out of 3 from prose (2x10=20 marks)
E. Language Component: (5x4 = 20 marks)

III Semester: Eng-3 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

***Untouchable* and Language Component**

Introduction: In this semester an unabridged Indian novel written in English is taught in the class – the novel form contains a long narrative and reveals the workings of a plot. In addition to presenting the Indian milieu, the prescribed novel brings to the fore the struggles and successes of people, their flaws and their resourcefulness. The language component teaches words to describe people and their actions, places and situations; trains students to find appropriate words and to write meaningful sentences and paragraphs. Comprehension questions, short notes and essay type questions in the examination test the level of understanding and the ability for expression.

Novel (2 Lecture hours per week):

Untouchable – Mulk Raj Anand

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Identification of Adverbs
2. One-word Substitutes (based on the text)
3. Construction of Sentences (with each of the given words)
4. Active and Passive Voice
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from the novel to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 4 short notes out of 8 on minor characters/incidents from the novel (4x5=20 marks)
C. 3 essay type questions out of 5 from the novel (3x10=30 marks)
D. Language Component: (5x4 = 20 marks

IV Semester: Eng-4 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

***Julius Caesar* and Language Component**

Introduction: In this final paper of their Language English, the students are introduced to a full-length play by William Shakespeare. The play unlocks the complex emotions, breathtaking actions and intriguing situations. The students experience the effect of dialogue, the brilliance of imagery and the magnificence of poetry. The Language Component here emphasizes on the transactional aspect of English language, in its spoken as well as written form. Comprehension questions, annotations and essay type questions in the examination test the level of understanding and the ability for expression.

Play (2 Lecture hours per week):

Julius Caesar – William Shakespeare

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Identification of Adjectives
2. Job Application Letter with CV
3. Correction of Sentences (verbs, articles, prepositions, adjectives, adverbs, redundancy)
4. Direct and Indirect Speech
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from the play to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 4 annotations out of 8 from the play (4x5=20 marks)
C. 3 essay type questions out of 5 from the play (3x10=30 marks)
D. Language Component: (5x4 = 20 marks)

Language English Syllabus – CBCS

From the Academic Year 2018-19

For Undergraduate Programs Offered in Faculty of Commerce and Faculty of Business Administration

I Semester: Eng-1 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

Intellection – I

Introduction: The Paper introduces some of the most delightful and instructive poems and prose pieces in English to the students beginning their undergraduate course. The literary texts in the Paper provide powerful contexts to understand human situations in our world and show how they are expressed in English language. The five units of the Language Component strengthen the student's English vocabulary and understanding of English sentence structure. C1 and C2 components, which consist of Test and Assignment, ensure that the students are learning well and prepare them for C3, the semester exam; the one-mark, five-marks and ten-marks questions in the examination are designed to evaluate language comprehension and textual understanding.

Poetry (1 Lecture hour per week):

1. Polonius' Advice to His Son – William Shakespeare
2. Death Be Not Proud – John Donne
3. Barter – Sara Teasdale
4. Partition – W. H. Auden
5. Ajamil and the Tigers – Arun Kolatkar

Prose (1 Lecture hour per week):

1. The Fir Tree – Hans Christian Anderson
2. The Romance of a Busy Broker – O. Henry
3. Water: The Elixir of Life – C. V. Raman

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Homophones (Words often confused)
2. Articles
3. Verbs in relation to tense, person and number of the subject
4. Prepositions (of place, time, position)
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Mark

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from poetry and prose to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 2 annotations out of 4 from poems (2x5=10 marks)
C. 2 essay type questions out of 4 from poems (2x10=20 marks)
D. 2 essay type question out of 3 from prose (2x10=20 marks)
E. Language Component: (5x4 = 20 marks)

II Semester: Eng-2 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

Intellection – II

Introduction: The students who are now familiar with the two important forms of literature – poetry and prose – explore more in these forms, which come with a slightly higher level of difficulty in this Paper. The literary pieces here deal with life in its varied hues most tellingly. The Language Component addresses the importance of achieving clarity in speaking and writing. C1, C2 and C3 goals are the same as in the previous semester.

Poetry (1 Lecture hour per week):

1. Ulysses – Alfred Lord Tennyson
2. If – Rudyard Kipling
3. Questions from a Worker Who Reads – Bertolt Brecht
4. You Start Dying Slowly – Pablo Neruda
5. We are the TSB Banking Directors – Darryl Ashton

Prose (1 Lecture hour per week):

1. A Deed of Bravery – Jim Corbett
2. Light is Like Water – Gabriel Garcia Marquez
3. A Lesson My Father Taught Me – A P J Abdul Kalam

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Punctuation (capitalization, comma, period, question mark, exclamation mark, quotation marks and apostrophe)
2. Framing Questions (with wh-words & yes/no questions)
3. Use of Negatives
4. Linkers (Conjunctions)
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from poetry and prose to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 2 annotations out of 4 from poems (2x5=10 marks)
C. 2 essay type questions out of 4 from poems (2x10=20 marks)
D. 2 essay type question out of 3 from prose (2x10=20 marks)
E. Language Component: (5x4 = 20 marks)

III Semester: Eng-3 (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

***The Financial Expert* and Language Component**

Introduction: In this semester an unabridged Indian novel written in English is taught in the class – the novel form contains a long narrative and reveals the workings of a plot. In addition to presenting the Indian milieu, the prescribed novel brings to the fore the struggles and successes of people, their flaws and their resourcefulness. The language component teaches words to describe people and their actions, places and situations; trains students to find appropriate words and to write meaningful sentences and paragraphs. Comprehension questions, short notes and essay type questions in the examination test the level of understanding and the ability for expression.

Novel (2 Lecture hours per week):

The Financial Expert – R. K. Narayan

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Identification of Adverbs
2. One-word Substitutes (based on the text)
3. Construction of Sentences (with each of the given words)
4. Active and Passive Voice
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. 10 comprehension questions out of 15 from the novel to be answered in a word, phrase or sentence (10x1= 10 marks)
B. 4 short notes out of 8 on minor characters/incidents from the novel (4x5=20 marks)
C. 3 essay type questions out of 5 from the novel (3x10=30 marks)
D. Language Component: (5x4 = 20 marks)

IV Semester: Eng-4: (3 Credits; 2 Lecture hours and 2 Tutorial hours per week)

Business Correspondence, *Refund* and Language Component

Introduction: Customized for the students of these streams, the Paper explains the nature of Business Correspondence and teaches writing various kinds of business letters. The one-act play conveys effectiveness of the dialogue. The Language Component here emphasizes on the transactional aspect of English language, in its spoken as well as written form. The semester examination tests the student's business letter-writing ability, grasp of the play and language skills.

Business Correspondence (1 Lecture hour per week):

1. Enquiry and Reply Letter
2. Offers and Quotations
3. Orders and Execution Letters / Cancellation Letters
4. Complaints and Settlements
5. Request for Loans / Overdrafts and Suitable Replies

One-Act Play (1 Lecture hour per week):

Refund – Fritz Karinthy

Language Component and **Literary Activity** (2 Tutorial hours per week):

1. Identification of Adjectives
2. Job Application Letter with CV
3. Correction of Sentences (verbs, articles, prepositions, adjectives, adverbs, redundancy)
4. Direct and Indirect Speech
5. Reading Comprehension (of an unseen passage)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Business Correspondence: Three 10 marks (5+5 type) questions out of Five (3x10 = 30 marks)
B. One-Act Play: i. Two 10 marks questions out of Three (2x10 = 20 marks)
   ii. Two 5 marks short notes out of Three (2 x5 = 10 marks)
C. Language Component: (5x4 = 20 marks)

Skill Enhancement Course III Semester B.A. – Faculty of Arts

SEC-1. Communicative Skills (2 Credits; 2 Lecture hours per week)

Objective: The undergraduate students have to cope with the challenges of life as well as profession, as soon as they get their degree. It is an advantage for them to learn English language for specific use in their future life and career. Appropriate language skills will empower them to achieve their academic and professional goals. It will also improve their social relationships. Hence, this paper is designed to train students in basic communication skills, speaking and writing.

1. Greetings (formal and informal), Introducing self and others (formal and informal) and closing a conversation. (Use of pronouns: I am, He is, You are, is/are, this-these and possessive pronouns-my/mine/your/his/her/our/its, etc.)
2. Making enquiries, requests, asking questions (Wh and yes/no) At least 6 situations: at a hotel, medical shop, railway station, bookshop, bank and college office. (Use of primary and modal auxiliary verbs: be, have, can you please, will you please, can I, if I may, may I, shall we, etc.)
3. Giving direction/instructions/information
   a) Giving directions: (Use of prepositions – in the corner, near, next to, between, opposite to, behind, beyond, along, past, across, down, up, towards, etc.)
   b) Giving instructions: direct and indirect. (D: 'This road is closed' IND: 'Could you please close the door?' 'May I have your attention please'- etc. Being polite, using helping verbs).
      Giving instruction for: preparing coffee/tea, preparing a word file/PPT (use of verbs, linkers)
   c) Giving information: ('Library will be open up to 5 pm', 'The bonus will be given next month', etc. Use of passive voice)
4. Telephone conversation: Etiquette, common phrases for beginning and closing conversation etc.
5. Academic writing skills: Interpreting and analyzing graphs, tables, diagrams, maps, family/organisation tree, etc. (adjectives-use of degrees of comparison, percentage, relationship, correlation)
6. Role play: Dialogue writing for different situations.
   a) Fixing an appointment (with doctor, with Bank Manager, with a friend for going to a movie, with a colleague, etc.)
   b) Inviting someone to a programme/function (inviting, accepting, declining words)
7. Group Discussion, Public Speaking (short speeches) and Facing an Interview (leadership qualities, positive attitude, etc.)
8. Short descriptions of people and places (Expressing facts and opinion, use of adjectives)
9. Translation: (English to Kannada) or
   Film/book review (for non-Kannada students)
10. Short Reports/narration of an incident/event/ news (use of past/present tense)

Books for Reference:

1. Sabina Ostrowska. *Unlock: Reading and Writing Skills (1).* CUP: Delhi, 2015 (for component 5, 8).
2. *Nelson English Work Book 1-6*. Foundation Books, 2006 (for basic syntax patterns).
3. Francis Peter. S. J. *Soft Skills and Professional Communication*. Tata McGraw-Hill, 2012 (for component 7).
4. P. Kiranmai Dutt and Geetha Rajeevan. *Basic Communication Skills*. CUP: Foundation Books, 2007(for components 2, 3, 4).
5. Jack C. Richards. *New Interchange: Intro*. CUP: New Delhi, 2000. (for components 1, 2, 3).
6. *Everyday English.* Hyderabad: The ICFAI Univ,2004 (for component 7).
7. Adrian Doff & Christopher Jones, eds. *Language in Use: Students' Self-study Work Book-Beginners, Intermediate and Higher Intermediate*. UK: CUP, 2016 (for components 6, 7, 8,1 0).
8. Ruth Gairns & Stuart Redman. *Oxford Word Skills: Basic*. Oxford: OUP, 2012 (for components 1, 2, 3, 6, 7, 8).
9. Michael McCarthy & Felicity O'Dell. *English Vocabulary in Use*: Advanced. Delhi: CUP, 2006 Rpt. (for components 3, 4, 6).
10. Michael Black & Wendy Sharp. *Objective IELTS: Intermediate – Self Study Student's Book.* UK: CUP, 2006 (for components 5, 7, 8, 10).
11. Vanessa Jakeman & Clare McDowell. *Insight into IELTS*. UK: CUP, 2007 (for components (5, 8, 10).

C1 – Test/Assignment = 05 Marks
C2 – Assignment/Test = 05 Marks
C3 - Examination = 40 Marks
Total = 50 Marks

Question Paper Pattern for C3:

A. Eight questions out of Ten: 8x5= 40 Marks

Generic Elective

V Semester – GE-1: Appreciating Short Stories (2 Credits; 2 Lecture hours per week)

Outline of the course: Designed for students who are from disciplines other than English, this set of six short stories create mirth and provoke thought in the class. Three of the stories are from the West and three from the Indian subcontinent. They serve as beautiful windows to the world, broadening our horizon. They also open our hearts and minds. The master storytellers delight the readers in their act of storytelling.

1. The Death of a Government Clerk – Anton Chekov
2. Gimpel the Fool – Isaac Bashevis Singer
3. The Year My Grandmother Was Supposed to Die – Mordecai Richler
4. The Blue Light – Vaikom Muhammad Basheer
5. Salt – Mahasweta Devi
6. Monk (Dervish) – Qurratulain Hyder

C1 -Test/Assignment = 05 Marks
C2 – Assignment/Test = 05 Marks
C3 - Examination = 40 Marks
Total = 50 Marks

Question Paper Pattern for C3:

A. Four essay type questions out of Six from Short Stories: 4x10 = 40 Marks

VI Semester – GE-2: Appreciating Novellas (2 Credits; 2 Lecture hours per week)

Outline of the course: The two novellas or short novels are by two great writers of the world: the Russian Nikolai Gogol and the American Mark Twain. *The Overcoat* is moving and *The Man That Corrupted Hadleyburg* is hilarious. The characters haunt and tease. The novellas stay with us for a long time, most probably forever.

1. *The Overcoat* – Nikolai Gogol
2. *The Man That Corrupted Hadleyburg* – Mark Twain

C1 -Test/Assignment = 05 Marks
C2 – Assignment/Test = 05 Marks
C3 - Examination = 40 Marks
Total = 50 Marks

Question Paper Pattern for C3:

A. Two essay type questions out of Three from *The Overcoat*: 2x10 = 20 Marks
B. Two essay type questions out of Three from *The Man That Corrupted Hadleyburg*: 2x10 = 20 Marks

Optional English Syllabus – CBCS

From the Academic Year 2018-19

For Bachelor of Arts Program

I Semester – DSC-A: Introduction to Literature (6 Credits; 6 Lecture hours per week)

Overview: The Paper introduces to the students who have opted to study English as one of their major subjects a few literary gems from various parts of the globe. The selections are aimed at initiating students for a systematic study of literature. They read the poems, essays and short stories alongside the succinct meanings of 20 literary terms chosen from *A Glossary of Literary Terms* by M. H. Abrams. C1 and C2 for 20 marks in every semester is part of the continuous evaluation process and helps students in knowing their texts and preparing for the exam better. The semester exam C3 for 80 marks tests the student's progress in the semester from multiple perspectives.

Poetry (Two hours):

1. Let me not to the marriage of true minds – William Shakespeare
2. The Cannonization – John Donne
3. Lycidas – John Milton
4. A Poison Tree – William Blake
5. She dwelt among the untrodden ways – William Wordsworth
6. Ode to Autumn – John Keats
7. My Last Duchess – Robert Browning
8. The Ballad of East and West – Rudyard Kipling

Prose (Two hours):

1. Of Studies – Francis Bacon
2. Beau Tibbs at Home – Oliver Goldsmith
3. On Going a Journey – William Hazlitt
4. The Storyteller – H. H. Munro (Saki)
5. The Necklace – Guy de Maupassant
6. Grief – Anton Chekov

Literary Terms from *A Glossary of Literary Terms* – M. H. Abrams (Two hours):

sonnet, dramatic monologue, elegy, ode, ballad, epic, fable, allegory, simile, metaphor, personification, hyperbole, understatement, pun, soliloquy, chorus, comic relief, touchstone, bildungsroman, picaresque.

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four annotations out of Six from Poetry: 4x5 =20 Marks
B. Two essay type questions out of Four from Poetry: 2x10 = 20 Marks
C. Two essay type questions out of Four from Prose: 2x10 = 20 Marks
D. Ten define-with-example-questions out of Fifteen from *Glossary* 10x2 = 20 Marks

II Semester – DSC-B: Indian Writing in English (6 Credits; 6 Lecture hours per week)

Overview: This paper introduces the students to one of the most thriving species in world literature today: Indian Writing in English. Poems spanning two generations of poets in English from India, a social play set in the contemporary India and a collection of short stories from the often neglected but important region Northeast are on platter. The familiar milieus and the bold approaches by the authors make this paper all the more exciting. The students need to annotate from poems and answer critical questions on all three forms.

Poetry (Two hours):

1. Poet, Lover, Birdwatcher – Nissim Ezekiel
2. A Summer Poem – Jayanta Mahapatra
3. The Bus – Arun Kolatkar
4. Wife – Polanki Ramamurthy
5. On Killing a Tree – Gieve Patel
6. Round and Round – Vikram Seth
7. Stammer – K Satchidanandan
8. I Dream of an English (Mulligatawny Dreams) – Meena Kandasamy

Play (Two hours):

Final Solutions – Mahesh Dattani

Collection of Short Stories (Two hours):

Next Door – Jahnavi Barua

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four annotations out of Six from Poetry: 4x5 =20 Marks
B. Two essay type questions out of Four from Poetry: 2x10 = 20 Marks
C. Two essay type questions out of Four from Play: 2x10 = 20 Marks
D. Two essay type questions out of Four from Short Stories: 2x10 = 20 Marks

III Semester – DSC-C: Elizabethan Theatre (6 Credits; 6 Lecture hours per week)

Overview: In this semester, the focus is on both a very important era and a very important form of literature. The Paper offers three masterpieces of Elizabethan Drama: a tragedy by Marlowe, a tragicomedy by Shakespeare and a comedy by Jonson. As they follow the action in the plays, the students grasp the dominant ideas of the Renaissance / Elizabethan era and the significant aspects of the plays. The students learn in this semester to annotate from plays and write argumentative essays.

Doctor Faustus – Christopher Marlowe (Two hours)

The Tempest – William Shakespeare (Two hours)

Every Man in His Humour – Ben Jonson (Two hours)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four annotations out of Eight from Three plays 4x5 = 20 Marks
B. Two essay type questions out of Three from *Doctor Faustus* 2x10 = 20 Marks
C. Two essay type questions out of Three from *The Tempest* 2x10 = 20 Marks
D. Two essay type questions out of Three from *Every Man in His Humour* 2x10 = 20 Marks

IV Semester – DSC-D: Victorian Fiction (6 Credits; 6 Lecture hours per week)

Overview: The students move on to another significant age and study a new form of literature: the Victorian age and the novel form. The three novels in this semester define the mores of the time. The novelists engage the question of morality, the industrial revolution, and the agrarian crisis philosophically within the confines of the literary form. The students learn in this semester to write short notes on incidents/events/characters from the novel and to write argumentative essays on the critical issues raised in the works.

Silas Marner – George Eliot (Two hours)

Hard Times – Charles Dickens (Two hours)

The Return of the Native – Thomas Hardy (Two hours)

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four short notes out of Eight from Three novels: 4x5 = 20 Marks
B. Two essay type questions out of Three from *Silas Marner*: 2x10 = 20 Marks
C. Two essay type questions out of Three from *Hard Times*: 2x10 = 20 Marks
D. Two essay type questions out of Three from *The Return of the Native*: 2x10 = 20 Marks

V Semester – DSE-A: (Choice between i and ii)

i. Twentieth Century British and American Literatures (6 Credits; 6 Lecture hours per week)

Overview: As the students are now in the final year of their course, the focus shifts to the Modern era. This Elective Paper is on twentieth century British and American literatures. The poems, the play, and the novel reflect the political and cultural churnings of the 20th century in the West. The writers develop new ways of expression to absorb the crises of the times such as war, alienation, displacement, discrimination, loneliness. The students studying this Paper develop skills to annotate memorable lines from the poems and write with clarity about complex issues raised in the texts.

Poetry (Two hours):

1. The Darkling Thrush – Thomas Hardy
2. Pied Beauty – G. M. Hopkins
3. The Strange Meeting – Wilfred Owen
4. The Second Coming – W. B. Yeats
5. The Love Song of J. Alfred Prufrock – T. S. Eliot
6. Mending Wall – Robert Frost
7. Poetry – Marianne Moore
8. Mirror – Sylvia Plath

Play (Two hours):

All My Sons – Arthur Miller

Novel (Two hours):

The Rainbow – D. H. Lawrence

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four annotations out of Six from Poetry: 4x5 =20 Marks
B. Two essay type questions out of Four from Poetry: 2x10 = 20 Marks
C. Two essay type questions out of Four from Play: 2x10 = 20 Marks
D. Two essay type questions out of Four from Novel: 2x10 = 20 Mark

ii. Literary Criticism and Practical Criticism (6 Credits; 6 Lecture hours per week)

Overview: One of the challenging forms of literature is literary criticism. Many believe it can only survive on creative writing and hence it is a parasitic form of writing. But it is not so simple as that. While literary criticism needs creative literature to come into life, it in turn gives a new life to literature, as illustrated by literary historians. It is in full display in this Paper. The literary criticism essays on drama, poetry, novel and practical criticism enlighten us, to say the least. In addition, there are a couple of critical essays by important thinkers of the modern times. The questions in the exam will test the student's understanding of the points of view of the critics. The practical criticism component will assess the independent ability of the student to approach a poem critically.

Literary Criticism Unit I (Two hours):

1. Preface to Shakespeare – Samuel Johnson
2. Preface to *The Lyrical Ballads* – William Wordsworth
3. A Study of Poetry – Matthew Arnold
4. Four Kinds of Meaning (from *Practical Criticism*) – I. A. Richards

Literary Criticism Unit II (Two hours):

1. English Poetry and the Modern World – F R Leavis and M B Kinch
2. Tradition and Individual Talent – T. S. Eliot
3. Why the Novel Matters – D. H. Lawrence
4. Modern Fiction – Virginia Woolf

Practical Criticism (Two hours): Two unseen poems

C1 -Test/Assignment = 10 Marks
C2 – Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Three essay type questions out of Four from Unit I: 3x10 = 30 Marks
B. Three essay type questions out of Four from Unit II: 3x10 = 30 Mark
C. Two analyses of Two unseen poems: 2x10 =20 Marks

VI Semester – DSE-B: (Choice between i and ii)

i. New Literatures in English (6 Credits; 6 Lecture hours per week)

Overview: This Elective Paper introduces students to literature that has emerged from the postcolonial Australia, Canada, Africa, the Caribbean Islands and Singapore. The mix truly reflects the myriad situations in both individual and political spheres. The poems, the play and the novel often speak about the trauma during the transition from one point of natural/cultural/political history to another. The students studying this Paper develop skills to annotate unforgettable lines from the poems and write cogently about the thought-provoking multi-layered problems that surface in the texts.

Poetry (Two hours):

1. The Shark – E J Pratt
2. Indian Reservation: Caughnawaga – A M Klein
3. Australia – A D Hope
4. Tracks Wind Back – Jeanine Leane
5. Refugee Mother and Child – Chinua Achebe
6. Africa – David Diop
7. Sour Grapes – Derek Walcott
8. Ulysses by the Merlion – Edwin Thamboo

Play (Two hours):

The Lion and the Jewel – Wole Soyinka

Novel (Two hours):

The Edible Woman – Margaret Atwood

C1 -Test/Assignment = 10 Marks
C2 -Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four annotations out of Six from Poetry: 4x5 =20 Marks
B. Two essay type questions out of Four from Poetry: 2x10 = 20 Marks
C. Two essay type questions out of Four from Play: 2x10 = 20 Marks
D. Two essay type questions out of Four from Novel: 2x10 = 20 Marks

ii. Postcolonial Critical Essays (6 Credits; 6 Lecture hours per week)

Overview: This special Paper consists a distinct set of ten critical essays from the postcolonial standpoint. While some of the essays here introduce burning issues and key concepts of postcolonialism, some others delve deep into specific aspects of it. Many of the groundbreaking essays in the Paper are by renowned thinkers, theorists and writers. The students who study this Paper gain a multi-dimensional perspective of the postcolonial world and become well-versed in the in the critical vocabulary of postcolonial studies.

Unit I (Three hours):

1. "On National Cultures" from *The Wretched of the Earth* – Frantz Fanon (Source: *Literature in The Modern World: Critical Essays and Documents* Edited by Dennis Walder)
2. "Colonialist Criticism" from *Hopes and Impediments: Selected Essays* – Chinua Achebe (Source: *Literature in The Modern World: Critical Essays and Documents* Edited by Dennis Walder)
3. "On the Abolition of English Department" – Ngugi Wa'Thiong'o (Source: *The Post-Colonial Studies Reader* Edited by Bill Ashcroft, Gareth Griffiths and Helen Tiffin)
4. "Caribbean Literature and its Criteria" from *The Colonial Encounter: Language* – Edward Kamau Brathwaite
5. "Negritude: A Humanism of the Twentieth Century" – Leopold Sedar Senghor (Source: *Perspectives on Africa: A Reader in Culture, History and Representation* Edited by Roy Richard Grinker, Stephen C Lubkemann and Christopher B Steiner)

Unit II (Three hours):

1. "Introduction" to *The Empire Writes Back* – Bill Ashcroft, Gareth Griffiths and Helen Tiffin
2. "Of Mimicry and Man: Ambivalence of Colonial Discourse" – Homi Bhabha (Source: JSTOR. Stable URL: http://www.jstor.org/stable/778467)
3. "Commonwealth Literature Does Not Exist" from *Imaginary Homelands* – Salman Rushdie
4. "The Discourse of the Orient" – Edward Said (Source: *Literature in The Modern World: Critical Essays and Documents* Edited by Dennis Walder)
5. "Writing from the Margin" from *Writing from the Margin and Other Essays* – Shashi Deshpande

C1 -Test/Assignment = 10 Marks
C2 - Assignment/Test = 10 Marks
C3 - Examination = 80 Marks
Total = 100 Marks

Question Paper Pattern for C3:

A. Four essay type questions out of Five from Unit I: 4x10 = 40 Marks
B. Four essay type questions out of Five from Unit II: 4x10 = 40 Marks

University of Mysore
Syllabus for B.A Functional English
CBCS 2018-19

Semester	Course	Title of the Paper	L-T-P	Credits
I	DSC-A	Phonetics and Grammar- I	5-1-0	6
II	DSC-B	Phonetics and Grammar- II	5-1-0	6

Note: Work file needs to be maintained by the students for class and home assignments. During the Tutorial hour, reading, writing, listening and speaking exercises to be carried out

University of Mysore
Syllabus for B.A Functional English
CBCS 2018-19

Semester I

Paper I- Phonetics and Grammar- I: 6 Credits

Unit I

Introduction to Linguistics and Phonetics
Air-stream Mechanism, Organs of Speech Mechanism

Unit II

Classification and description of speech sounds in English
a. Vowels and Diphthongs
b. Consonants
Elementary Phonetic Symbols in Transcription

Unit III

Verbs: linking verbs, auxiliaries, transitive ad intransitive verbs, negative verbs and infinitives

Unit IV

Tenses, concord, adverbs, confusion of adjectives and adverbs, Degrees of Comparison

C1- Assignment/test	10 marks
C2 - Viva-voce	10 marks
C3- Examination	80 marks

Pattern of Marks Distribution for C3:

Unit I: 20 Marks

Unit II: 20 Marks

Unit III: 20 Marks

Unit IV: 20 Marcs

Total: 80 Marks

Semester II

Paper II- Phonetics and Grammar- II: 6 Credits

Unit I

International Phonetic Alphabet (IPA); Phonology; Received Pronunciation (RP); General Indian English (GIE)

Unit II

Syllable and Syllable Structure; Word Accent; Accent and Rhythm in Connected Speech; Intonation ; Assimilation and Elision

Unit III

Voice; Direct and Indirect speech; Sentence Connectors

Unit IV

Arrangement of Jumbled Sentences (Word Order); Guided Paragraph Writing; Comprehension

C1- Assignment/Test	10 marks
C2 - Viva-voce	10 marks
C3- Examination	80 marks

Pattern of Marks Distribution for C3:

Unit I: 20 Marks

Unit II: 20 Marks

Unit III: 20 Marks

Unit IV: 20 Marcs

Total: 80 Marks

Tel. No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC.2(S)/31/18-19

Dated: 07.07.2018

NOTIFICATION

Sub: Revision of syllabus for Environmental Studies as per CBCS pattern from the Academic year 2018-19.

Ref: 1. Decision of the Academic Council meeting held on 19.06.2018.
2. Decision of Board of Studies in Environmental Science (CB) meeting held on 04.07.2018.

*****

As per decision of the Academic council held on 19.06.2018, the Board of Studies in Environmental Science (CB) was convened a special BOS meeting on 4th July, 2018 has recommended to revise credit pattern and the syllabus for Environmental Studies (UG) as per CBCS pattern from the academic year 2018-19 & the same is hereby notified.

The syllabus may be downloaded **from the University Website i.e.,** www.uni-mysore.ac.in.

Draft approved by the Registrar

Deputy Registrar (Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Physics, Manasagangotri, Mysore.
3. The Chairperson, BOS in Environmental Science (CB), DOS in Environmental Science, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Environmental Science, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Principals of the Affiliated Under Graduate Colleges University of Mysore, Mysore.
7. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
9. Office file.

Ability Enhancement Compulsory Courses (AECC – Environmental Studies)

Unit 1: Introduction to environmental studies

- Multidisciplinary nature of environmental studies; components of environment – atmosphere, hydrosphere, lithosphere and biosphere.
- Scope and importance; Concept of sustainability and sustainable development.

(2 Lectures)

Unit 2: Ecosystems

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chain, food web and ecological succession. Case studies of the following ecosystems:
  a) Forest ecosystem
  b) Grassland ecosystem
  c) Desert ecosystem
  d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 Lectures)

Unit 3: Natural Resources: Renewable and Non-renewable Resources

- Land Resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Heating of earth and circulation of air; air mass formation and precipitation.
- Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

(8 Lectures)

Unit 4: Biodiversity and Conservation

- Levels of biological diversity :genetic, species and ecosystem diversity; Biogeography zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value. (T)

(8 Lectures)

Unit 5: Environmental Pollution

- Environmental pollution : types, causes, effects and controls; Air, water, soil, chemical and noise pollution
- Nuclear hazards and human health risks
- Solid waste management: Control measures of urban and industrial waste..
- Pollution case studies. (T)

(8 Lectures)

Unit 6: Environmental Policies & Practices

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture.
- Environment Laws : Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act; International agreements; Montreal and Kyoto protocols and conservation on Biological Diversity (CBD). The Chemical Weapons Convention (CWC).
- Nature reserves, tribal population and rights, and human, wildlife conflicts in Indian context (T)

(7 Lectures)

Unit 7: Human Communities and the Environment

- Human population and growth: Impacts on environment, human health and welfares.
- Carbon foot-print.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management: floods, earthquakes, cyclones and landslides.
- Environmental movements: Chipko, Silent valley, Bishnios of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

(6 Lectures)

Unit 8: Field work

- Visit to an area to document environmental assets; river/forest/flora/fauna, etc.
- Visit to a local polluted site – Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems-pond, river, Delhi Ridge, etc.

(Equal to 5 Lectures)

Suggested Readings:

1. Carson, R. *2002. Silent Spring*. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R.1993. This *Fissured Land:* An Ecological History of India. Univ. of California Press.
3. Gleeson,B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P.H. 1993. Water in *Crisis*. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J. Gary K. Meffe, and Carl Ronald carroll. *Principles of Conservation Biology*.
   Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36-37.
7. McCully, P.1996. *Rivers no more: the environmental effects of dams*(pp. 29-64). Zed Books.
8. McNeil, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.

9. Odum, E.P., Odum, h.T. & Andrews, J.1971. *Fundamentals of Ecology.* Philadelphia: Saunders.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.
11. Rao, M.N. & Datta, A.K. 1987. *Waste Water Treatement.* Oxford and IBH Publishing Co. Pvt. Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. *Environment.* 8th edition. John Wiley & Sons.
13. Rosencranz, A., Divan, S., & Noble, M.L. 2001. *Environmental law and policy in India.* Tripathi 1992.
14. Sengupta, R. 2003.*Ecology and economics:* An approach to sustainable development. OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. *Ecology, Environmental Science and Conservation.* S. Chand Publishing, New Delhi.
16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. *Conservation Biology: Voices from the Tropics.* John Wiley & Sons.
17. Thapar, V. 1998. *Land of the Tiger: A Natural History of the Indian Subcontinent.*
18. Warren, C.E. 1971. *Biology and Water Pollution Control.* WB Saunders.
19. Wilson, E.O. 2006. *The Creation: An appeal to save life on earth.* New York: Norton.
20. World Commission on environment and Development. 1987. *Our Common Future.* Oxford University Press.
21. www.nacwc.nic.in
22. www.opcw.org

Note:

1. '**T**' Refers to Tutorial Topics in the syllabus.
2. Weekly two hours of Lectures (two Credits) and two hours (one Credit) of Tutorials with minimum 20 to 30 Students in a batch for Tutorials.
3. The examination question paper may have the same Pattern as adopted for the other subjects and the paper has to account for 100 marks with 3hrs duration for examination.

S. Belagali 4/7/2018

(Prof. S. L. Belagali)
Chairman, BOS in Environmental Science
(UG & PG)

Prof. S. L. Belagali
M.Sc., Ph.D (England)
CHAIRMAN
Board of Studies in
Environmental Science
University of Mysore
Manasagangotri
MYSORE-570 006

Tel. No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC.2(S)/31/18-19

Dated: 15.06.2018

NOTIFICATION

Sub: Revision of syllabus for Geography (UG) as per CBCS pattern from the academic year 2018-19.

Ref: 1. Decision of Board of Studies in Geography (UG) meeting held on 18.03.2018.
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.
3. Decision of the Deans Committee meeting held on 22.05.2018.

*****

The Board of Studies in Geography (UG) which met on 18th March, 2018 has recommended to revise the syllabus for B.Sc. Geography as per CBCS pattern from the academic year 2018-19.

The Faculty of Science and Technology and the Deans committee meetings held on 21-04-2018 and 22-05-2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The CBCS syllabus of B.Sc. Geography course is annexed. The contents may be downloaded **from the University Website i.e., www.uni-mysore.ac.in**.

Draft approved by the Registrar

15/6

Deputy Registrar(Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Physics, Manasagangotri, Mysore.
3. The Chairperson, BOS in Geography, DOS in Geography, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Geography, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Principals of the Affiliated Colleges where UG Program is running in Science stream.
7. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
9. Office file.

UNIVERSITY OF MYSORE

PROFORMA OF INSTRUCTION AND EXAMINATION

UNDER CHOICE BASED CREDIT SEMESTER SYSTEM (CBCSS)AND CONTINUOUS ASSESSMENT GRADING PATTERN (CAGP)OF THE OPTIONAL SUBJECT GEOGRAPHY B.A/B.SC. PROGRAMME

Duration of the Course: 3 Years (6 Semesters)

Semester	Course	Title of the Paper	Instruction Hrs (L:T:P) /Week	Credit	Duration of Exam (Hrs.)	Marks		Total Marks
						I A (C1 + C2)	Final Exam (C3)	
I	DSC-1A -Theory	Physical Geography	4:0:0	4	3	10+10	80	100
	DSC-1A - Practical	Maps &Scale, Representation of relief features & Meteorological Instruments	0:0:4	2	3	05+05	40	50
II	DSC-2B- Theory	Human Geography	4:0:0	4	3	10+10	80	100
	DSC-2B -Practical	Map Projection	0:0:4	2	3	05+05	40	50
III	DSC-3C- Theory	Regional Geography of the World	4:0:0	4	3	10+10	80	100
	DSC-3C- Practical	Cartograms & Distribution Maps	0:0:4	2	3	05+05	40	50
IV	DSC-4D- Theory	Geography of India	4:0:0	4	3	10+10	80	100
	DSC-4D -Practical	Basic Statistics	0:0:4	2	3	05+05	40	50
DISCIPLINE SPECIFIC ELECTIVE PAPERS DSE-1 & DSE-2 (Choose Any One)								
V	DSE-1- Theory	Economic Geography	4:0:0	4	3	10+10	80	100
	DSE-1a- Theory	Settlements Geography	4:0:0	4	3	10+10	80	100
	DSE-1b- Theory	Tourism geography	4:0:0	4	3	10+10	80	100
	DSE-1- Practical	Interpretation of topographical maps & Indian daily weather report	0:0:4	2	3	05+05	40	50
VI	DSE-2- Theory	Environmental Geography	4:0:0	4	3	10+10	80	100
	DSE-2a- Theory	Regional Geography of Karnatka	4:0:0	4	3	10+10	80	100
	DSE-2b- Theory	Population & Political Geography	4:0:0	4	3	10+10	80	100
	DSE-2- Practical	Surveying and Fundamentals of GIS	0:0:4	2	3	05+05	40	50
SKILL ENHANCEMENT COURSE (SEC) (Compulsory paper)								
III	SEC- 1 PAPER	Regional Planning &Development	2:0:0	2	3	05+05	40	50
IV	SEC- 2 PAPER	Field Techniques & Survey based Project Report	2:0:0	2	3	05+05	40	50
GENERIC ELECTIVE								
V	GE-1	Introduction to Physical Geography	2:0:0	2	3	05+05	40	50
	GE-2	Regional Geography of the World	2:0:0	2	3	05+05	40	50
VI	GE-3	Introduction to human Geography	2:0:0	2	3	05+05	40	50
	GE-4	Regional Geography of India	2:0:0	2	3	05+05	40	50

B.A I Semester Core Course (Paper – I)

(For Students admitted in 2017-18 and onwards)Teaching hours : 8hrs (theory 4hrs + Practical 4hrs)
Credit 4:0:2 Total 6 credits

Title of the Paper: Physical Geography **60 Hrs lectures**

Unit 1. Physical Geography: 10

a) Meaning, Definition, Field, Nature(Multidisciplinary) and Scope, Components of Earth System – Lithosphere, Atmosphere, Hydrosphere and Biosphere
b) Theories regarding origin of the Earth: Nebular and Tidal theories

Unit 2. Lithosphere: 15

a) Structure and Composition of the earth
b) Distribution of land and water bodies : Wegner's Theory of Continental Drift and plate Tectonic

Unit 3. Geomorphic agents and processes of Denudation 10

a) i) River ii) Glacier iii) Underground water iv) wind

Unit 4. Atmosphere 15

a) Meaning, composition and structure
b) Distribution of Temperature, Pressure and Wind system – Insulation, Factors affecting ,Atmospheric temperature,
c) Atmospheric Pressure – Factors affecting on pressure, Vertical and Horizontal distribution, Pressure belts of the world,
d) Winds system – Factors affecting, types – Planetary, seasonal, local and Variable winds – with special reference to Tropical cyclones.

Unit 5. Hydrosphere 10

a) Relief of ocean floor
b) Tides and Ocean currents – Indian and Pacific

Reading List

1. Conserva H. T., 2004: Illustrated Dictionary of Physical Geography, Author House, USA.
2. Gabler R. E., Petersen J. F. and Trapasso, L. M., 2007: Essentials of Physical Geography (8th Edition), Thompson, Brooks/Cole, USA.
3. Garrett N., 2000: Advanced Geography, Oxford University Press.
4. Goudie, A., 1984: The Nature of the Environment: An Advanced Physical Geography, Basil Blackwell Publishers, Oxford.
5. Hamblin, W. K., 1995: Earth's Dynamic System, Prentice Hall, N.J.
6. Husain M., 2002: Fundamentals of Physical Geography, Rawat Publications, Jaipur.
7. Monkhouse, F. J. 2009: Principles of Physical Geography, Platinum Publishers, Kolkata.
8. Strahler A. N. and Strahler A. H., 2008: Modern Physical Geography, John Wiley & Sons, New York.
9. B.N Tikka – Physical Geography
10. Savindra Singh – Physical Geography.

I-Semester, Practical Paper – I

Maps & Scale, Representation of Relief features & Meteorological Instruments

Unit **Topic** **Total Teaching Hours: 60**

1. Maps: definition, types and importance of maps-characteristics features of maps. Scales-definition and types, conversion of statements into RF and RF in to statement. Construction of graphical scales – linear and diagonal. Enlargement and reduction of maps: square and triangular method.Latitudes and longitudes- Longitude and time – local, standard and Greenwich- time zones- Calculation of time- International Date Line

2. Relief features – Introduction, methods of relief representation- pictorial – Mathematical and composite methods. Contours – characteristics – contour diagrams representing- Uniform, Undulating ,Concave , Convex slopes. Contours diagrams representing following relief features- Conical hill, saddle, hill, plateau, ridges, escarpment, spur, knoll, gorge, 'V' shaped valley , U shaped valley, hanging valley, rapids and water falls.

Meteorological Instruments- Functions and uses- Centigrade & Fahrenheit Thermometer, Maximum and Minimum thermometer, Hygrometer, Mercury barometer, Aneroid Barometer, Wind vane, Cup Anemometer, Rain gauge

References:

1. Gopal Singh — **Map Work and Practical Geography,** III ed, Vikas Publishing House,New Delhi,
2. Gupta K.K and Tyagi V.C — **Working with maps,** Survey of India, Department of Science and Technology, Govt of India,Dehra Dun 1992.
3. Jackie Smith B.A(ed) — **Dictionary of Geography,** Cosmo Publications, New Delhi , 1983.
4. John and Keats: — **Cartographic design and production**, II edition 1989,John wiley, New York.
5. Mishra R.P : — **Fundamentals of Cartography,**1969, Prasaranga, University of Mysore, Mysore.
6. Monkhouse F.J and — **Maps and Diagrams,** Wilkinson H.R: Mathuen and Co, Ltd., London, 1952.
7. Phyllis Dink — Map work, x (ed) Atma Ram & Sons, Delhi,1967
8. Raisz E — **General Cartography,** 1948.Tata-MC-Graw Hill, New York.
9. Ranganath — **An Introduction to Practical Geography,** Part IKannada version, Vidhyanidhi Publications, Gadag-582101, Karnataka..
10.Singh. R.L. — **Elements of Practical Geography,** Kalyani Publishers,New Delhi, 1979.

B.A II Semester Core Course (Paper – II)

(For Students admitted in 2017-18 and onwards)Teaching hours : 8hrs (theory 4hrs + Practical 4hrs)
Credit 4:0:2 Total 6 credits

Title of the Paper: Human Geography 60 Hrs lectures

1. Definition – field and scope of human Geography. Branches and Importance of Human Geography. Development of human geography- contributions of Germans, French and Americans.

2 Conceptual approaches to the study of man – Environment Relationship- Environmental determinism, Possibilism, Probabalism , Revival of Environmental determinism.

3. Global cultural diversities- Culture- diffusion of culture .Hager strand theory of diffusion -Race Religion, Language, Political systems, Global patterns of tribes .

4. Cultural realms of the world – Study of major realms with reference to ecology, economy and culture.

5. Population Composition- Age Structure, Sex Ratio, Literacy rate

References:

1. Dickens and Pitts : Introduction to Human Geography, 1963.

2. Harm d. Blij : Human and Economic Geography, Mac Millan, New York, 1992.

3. Hussain M : Human Geography, Rawat Publications Jaipur, 2003.

4. Nellson, Gabler & Vining Human Geography, People, Cultures and Landscapes,1995.

5. Peter Daniels, Michael Bradshaw Denis Shaw, James Sidaway : Human Geography, Issues for the 21 st Century , Pearson 2003.

6. Norris and Haring : Political Geography, Charles. E. Merill Publishing Company.

7. Ranganath : Principles of Human Geography (Kan. Ver.) Vidyanidhi, Gadag, 2002.

8. Rubenstein J.M : An Introduction to Human Geography, Macmillan Publishing Company 1992.

II SEMESTER
Practical Paper – II

Title of the Paper - Map projections

1. Map projections – Definition, Classification and importance.

2. Cylindrical projection – Simple cylindrical,
Cylindrical equal area ,
Mercator's projections .

3. Conical projections - Simple conical projections,
Conical projection with the standard parallels,
Bonne's projection,
Polyconic projection .

4. Zenithal projections – polar case, Zenithal equidistant equal area,
Zenithal gnomonic ,
Zenithal stereographic,
Zenithal orthographic.

5. Conventional projections – Sinusoidal projection,
Mollweids projection.

6. Choice of map projections and uses.

Note: The above map projections should be constructed with exercises, properties and uses.

References:

1. Salar Massod. M. :Map Projections, Roa and Raghavam Co., Mysore.
2. Ranganath & Mallappa :Map Projections (kan version), Chetana, Book House, Mysore.
3. Erwin Raisz : General Cartography; Mc Graw- Hill book company Inc.
4. Singh R L : Elements of Practical Geography, Student'sFriends, Allahbad.
5. George P Kellaway : Methuen & Co. , Ltd., London.
6. Gopal Singh : Mapwork & Practical Geography, Surjeet Book Depot, New Dehli.

B.A III Semester Core Course (Paper – III)

(For Students admitted in 2017-18 and onwards),Teaching hours: 8hrs (theory 4hrs + Practical 4hrs)
Credit 4:0:2 Total 6 credits

Title of the Paper: Regional Geography of the World (Credits - 4)

60 Hrs lectures.

1. Distribution of major land forms -Mountain, plains and plateaux-Rivers of the world -Natural vegetation , types and distribution- soils types and distribution.

2. Natural regions of the world- classification - A detail study of equatorial, monsoon, deserts, grasslands and tundra regions.

3. Mineral and power resources -Production and distribution and trade of Iron ore, manganese, gold, coal, petroleum, Natural gas.

4. Transportation, Roads, Railways and Ocean routes. Complementary and computation among nodes of transport. Hoovar's transport cost theory.

References:

1. Heintzelman and High Smith: World Regional Geography. Prentice Hall, New Delhi 1965.

2. Husain .M : World Geography, Rawat, Jaipur, 2004.

3. Tikkha, Bali, Sekhon : World Regional Geography, New Academic Publishing Company, Jalandhar, 2002.

4. Mallappa P. Regional Geography of the world, Cheethana Publication, Mysore

4 Ranganath; Regional Geography of the world , Vidyanidhi,Gadag,2009.

III SEMESTER

Practical Paper – III

Cartograms, and Distribution Maps

Unit Topic Total teaching hours: 60

1. Significance and use of cartograms in geography

2. Line graphs- single, and poly graphs

3. Bar graphs- single and multiple bars (Both vertical and horizontal)

Compound bar, pyramid graphs

4. Climograph, hythergraph, Ergo graph

5. Proportionate circles - sector/ wheel diagram

6. Thematic mapping – Choropleth method, Dot method, Choroschematic, Chorocromatic, and isopleth

7. Distribution of map-

References:

1) Gopal Singh — Map Work and Practical Geography, III ed, Vikas Publishing House,New Delhi,
2) Mishra R.P : — Fundamentals of Cartography, 1969, Prasaranga University of Mysore, Mysore.
3) Monkhouse F.J and — Maps and Diagrams
4) Wilkinson H.R: — Mathuen and Co, Ltd., London, 1952.
5) Raisz E — General Cartography, 1948. Tata-MC-Graw Hill, New York
6) Robinson .H — Elements of Cartography,John Wiley, London. 1963.
7) .Singh. R.L. — Elements of Practical Geography Kalyani Publishers,New Delhi, 1979.
8) Singh.L. R — Practical Geography, Sharada Pustak Bhavan, Allahabad,2008

B.A IV Semester Core Course(Paper – IV)

(For Students admitted in 2017-18 and onwards)Teaching hours : 8hrs (theory 4hrs + Practical 4hrs)

Credit 4:0:2 Total 6 credits

Title of the Paper: Regional Geography of India (Credits - 4)

60 Hrs lectures

1. Location, size and extent- political divisions, Relief features- Drainage system- climate, seasons, Rainfall- monsoons and its effects on the economy. Vegetation - major types and their distribution- aforestation programmes. Soils- major types, their characteristics- soil erosion and conservation.

2. Irrigation and agriculture:Irrigation- types, multipurpose projects – DVC, Bhakra nangal, Alamatti- river valley projects . Agricultural crops- production and distribution of rice, wheat , cotton , sugar cane and tea.Development of agriculture- green revolution and white revolution.

3. Mineral and power resources-Significance, production and distribution of Iron ore, Mica, Bauxite, Coal Petroleum, Electricity- Thermal, Hydro, Atomic. Major industries- iron and steel, cotton textile, sugar, paper,major industrial regions of India

4. Population – Growth, Distribution and Density, composition and problems - Urbanization - Trends and Patterns.

5. Transportation Network- roads, railways, water ways, airways. Trade - Inter and International .Tourism -types.

References:

1. Gopal Singh : A Geography of India, Atmarama and Sons, New Delhi.
2. ICAR : Cropping pattern in India, 1974.
3. Mathur, S.M. : Physical Geology of India, NBT 1991.
4. Ranganath : Regional and economic Geography of India (Kan.Ver) Vidyanidhi , Gadag, 2006.
5. Ranjit Thirtha : Geography of India, Raniat, Jaipur 1996.
6. Khullar D.R. : India a Comprehensive Geography , Kalyani Publishers,Ludhiana 2000.
7. Tiwari R.C : Geography of India, Prayag Pustak Bhawan, Allahabad,. 2003

IV SEMESTER,

Practical Paper – IV

Practical- Basic Statistics

Unit Topic Total teaching hours: 60

1. Statistics- meanings, importance and limitations- sources of data- primary and secondary. Sampling- meaning and types of sampling.Measures of central tendency – mean, median, mode, direct and short cut methods for individual discrete and grouped data. Measures of dispersion -mean deviation, Quartile deviation and standard deviation.

2. Measures of Relative dispersions, Co-efficient of Mean Deviations, Co-efficient of Variations, Time series Analysis, Index Numbers. Correlation Analysis – characteristics and types , Correlation .Coefficient for grouped and ungrouped data.Regression Analysis – meaning and types, uses of Regression, Regression lines and Regression equations, Computation of Regression equations.

References:

1.Singh. R.L. : **Elements of Practical Geography,** Kalyani Publishers,New Delhi, 19791. ..

2. Gopal Singh : **Map Work and Practical Geography,** III ed, Vikas, Publishing House, New Delhi,

3. Mishra R.P : **Fundamentals of Cartography,**1969, Prasaranga,University of Mysore, Mysore.

4. Zamir Alvi : **Statistical Geography, Methods and Applications**, Rawat Publications, Jaipur 1995.

Discipline Specific Elective Papers (3 Compulsory Papers)

B.A: V -Semester DSE-I (Paper – I)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs Practical 4hrs
Credit 4:0:2 Total 6 credits

Title of the Paper: Economic Geography (credits - 4)

1. Economic geography – definition, field and approaches, Evolution of economic geography

2. Resources – Concept – characteristics – classification- conservation and management.

3. Agricultural and allied activities

Agricultural types – agricultural regions – von thunens agricultural location theory Crops – Rice and wheat, Cotton and sugar cane, Coffee and tea, Fishing and animal resources.

4. Industries- factors of location – webers theory, Losch theory, Industrial regions of the world, International trade – basis, pattern and trends.

References:

1. Alexander and Hartshorne : Economic Geography Prentice-Hall, III ed. 2000.
2. Guha and Chattoraj : A New approach to Economic Geography.
3. Khanna and Gupta : World Resources and Trade, S.chand and Company, New Delhi.
4. Mallappa : Economic Geography (Kan.Ver) Chetana Book House, Mysore 2001.
5. Ranganath : A Geography of Industrial Resources, Vidyanidhi Prakashna Gadag 2001.

Discipline Specific Elective Papers (3 Compulsory Papers)

B.A V Semester DSE-2 (Paper – II)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs Practical 4hrs
Credit 4:0:2 Total 6 credits

Title of the Paper: Settlement Geography (credits - 4)

1. Meanings of settlements and types – rural settlements – classifications based on site, situation, shape and features.

2. Housing types; evolution of dwellings, housings, types based on

Materials, roofs with Indian examples

3. Urban settlements – Definition, Location and situation, Hierarchy- Rank - size rule.

Primate city concepts,Central place theory of Chris taller

4. Structure of urban centers - Concentric theory, Sector theory , Multiple nucli theory

References:

1. Dickens and Pitts : Introduction to Human Geography, 1963.

2. Harm d. Blij : Human and Economic Geography, Mac Millan, New York, 1992.

3. Hussain M : Human Geography, Rawat Publications Jaipur, 2003.

4. Nellson, Gabler & Vining: Human Geography, People, Cultures and Landscapes,1995.

5. Peter Daniels, Michael Bradshaw Denis Shaw, James Sidaway: Human Geography, Issues for the 21 st Century , Pearson 2003.

6. Norris and Haring : Political Geography, Charles. E. Merill Publishing Company.

7. Ranganath : Principles of Human Geography (Kan. Ver.) Vidyanidhi, Gadag, 2002.

8. Rubenstein J.M : An Introduction to Human Geography, Macmillan Publishing Company 1992.

9. Singh. R.Y : Geography of Settlements, Rawat, NewDelhi,2007.

10. Harold Carter: The study of Urban Geography, 1982

Discipline Specific Elective Papers (3 Compulsory Papers)

B.A V Semester DSE-3 (Paper –III)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs Practical 4hrs
Credit 4:0:2 Total 6 credits

Title of the Paper: Geography of Tourism (credits - 4)

1. Origin, development and significances of tourism -Factors influencing Tourism

2. Types of tourists- domestic and foreign

3. Tourism infrastructure- Transportation, communication, resorts, hotels

4. Tourism planning and development, Marketing advertisement -hospitality - associated problems, Accommodation, accebility and resources, Financial problem and resources.

References :

1 Jagmohan negi and Gaurav N Manohar : Tourism-India,50 years of independence,1947-97 status

2 Manohar Sajani : Encyclopedia of Tourism resources in India Gyan, publications, 2001, New Delhi.

3 Goswami V.K : Tourism in India, Gyan Publications, 1987

4 Manohar sajani : Tourism and growth, Management and incentives,Gyan Publications 2002

5Bezbaruah M P : Indian Tourism, Beyond millennium, Gyan publications,1999.

6 Batta.N Tourism and the environment, I ndus books 2004

7 Bhardwaj, Kandan Chaudhary : Domestic tourism in India ,Indus books,2004

V SEMESTER

Practical Paper – V

Practical - Interpretation of Topographical Maps

Unit Topic Total teaching hours: 60

1. Topographical maps – 1mportance, types of SOI topographical maps based on scale.
2. Conventional symbols – meaning – importance, conventional symbolsof physical and cultural phenomena.
3. Marginal features of the topographical maps.

4. Interpretation of the topographical maps under the followings heads
   i) Relief features
   ii) Drainage pattern
   iii) Natural vegetation and land use
   iv) Settlements, Transportation and other cultural features.
5. Conventional symbols of weather maps

6. 4. Interpretation of Indian weather reports of –
   Rainy season
   Winter season,
   Summer season (Any two seasons)

References:

1.Singh. R.L.: **Elements of Practical Geography,**Kalyani Publishers,New Delhi, 19791. ..

2. Gopal Singh: **Map Work and Practical Geography,** III ed, Vikas Publishing House,New Delhi,

3. Gupta K.K and Tyagi V.C: **Working with maps,** Survey of India, Department of Science and Technology, Govt of India, Dehra Dun 1992.

4. Mishra R.P :**Fundamentals of Cartography,** 1969, Prasaranga, University of Mysore, Mysore.

5. Monkhouse F.J and **Maps and Diagrams**

6. Wilkinson H.R: Mathuen and Co, Ltd., London, 1952.

6. D.R.Khullar : Essentials of Practical Geography., New Academic Publishing, Mai Hiran Gate, Jalandhar

,2003

Discipline Specific Elective Papers (3 Compulsory Papers)

B.A VI Semester DSE-I (Paper – IV)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs Practical 4hrs
Credit 4:0:2 Total 6 credits

Title of the Paper: Environmental Geography (credits - 4)

1. Meaning and components of environment- field and scope of environmental geography – Interdisciplinary nature of environmental geography

2. Ecosystem – Types – functions, energy flow, ecological pyramids,- Bio Geo Chemical cycles.

3. Environmental pollution -Meaning, types and causes of pollution Air pollution, water pollution, noise pollution and degradation , Depletion of ozone layer, Green house effect Climate change

4. Conservation and management of environment -role of international and national polices- role of UNO .Rio summit declarations. Kyoto Declarations. Koppen Hagen summits,

REFERENCES:

1. Agarwal K.C : Environmental Biology, Nidhi publishers Ltd, 2001, Bikaner

2. Chaurasia B.P : Environmental Pollution Consequences and measures

2. Mathur H.S : Environmental Resources; The crisis of Development
3. Odum E.P : Fundamentals of Ecology, WB Saunders Co, London, 1971
4. Saxena H.M : Environmental Geography Rawat, Publications, Jaipur, 1999
5. Sharma P.D : Ecology and Environment Rastogi Publications, New Delhi, 1999
6. Strahler and Strahler : Geography and Mans Environment, John Weily, New York 1986
7. Heywood V.H & Watson RT, Global Biodiversity Assessment OUP, 1995
8. Dash M.C : Fundamentals of Ecology, Tata McGraw Hill New Delhi 2002.

Discipline Specific Elective Papers (3 Compulsory Papers)

B.A VI Semester DSE-2 (Paper – V)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs Practical 4hrs

Credit 4:0:2 Total 6 credits

Title of the Paper: Regional Geography of Karnataka (credits - 4)

1. Physical setting - location, size and extent- relief features – Climate, Rivers, Soils and vegetation.

2. Major rivers valley projects of Karnataka in the Krishna and Cauvery River basins. Major agricultural regions – Major crops-
   Dairy farming.

3. Minerals and Industries – Silk, Sugar, Software Industries

4. Population- growth and Density, sex- ratio- Urbanization, trends and patterns.

5. Transportation -Patterns of Road and Railways- Ports and Harbors Major tourist centers

References:

1. Karnataka State Gazetter, 2 Volumes-

2. Mallappa : Geography of Karnataka (Kan.Ver)

3. Misra R.P : Geography of Mysore State

4. NBK Reddy and Murthy G.S : Regional Geography of Mysore State

5 Ranganath; Regional Geography ofKarnataka, Mysore Book House, Mysore, 2010

Discipline Specific Elective Papers (3 Compulsory Papers)

B.A VI Semester DSE-3 (Paper – VI)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs Practical 4hrs

Credit 4:0:2 Total 6 credits

Title of the Paper: Population and political geography (Credits - 4)

1. Population geography – evolution, nature, and scope. Approaches – sources of population data.

2. Population growth – Distribution, Density and Demographic Cycle migration – causes – types and consequences

3. Population composition - literacy, age structure, sex-ratio, life expectancy, Rural – urban occupation

4. Elements of political geography – state and nature, frontiers, boundaries

And buffer zones – heart land and rim land theory

References:

1. Norris and Haring : Political Geography, Charles. E. Merill Publishing Company

2. Dixit. R.D Political Geography, PHI, New Delhi – 2008.

3. Ranganath Principles of Human Geography, Vidyanidhi, 2008,GADAG

4. Chandna. R.C ; Geography of Population Kalyani NewDelhi 2008

5. Mohammad ; Population Geography, Rawat, New Delhi - 2008

Izhar Hassan

6. Sudeepta Adhikari; Political Geography of India, Sharada, Allahabad,U.P.

VI SEMESTER

Practical Paper – VI

Surveying and Fundamentals of GIS

Unit Topic Total teaching hours: 60

1. Surveying – meaning – importance – and types of surveying
2. plane table surveying – Radiation and intersection
3. prismatic compass surveying – Radiation and intersection
4. chain surveying – types of chains- triangulation

5.GIS- meaning, components of GIS, spatial data entities – point, line, polygon – Source of spatial data – Topographical maps, Aerial Photographs Satellite imageries

6. Spatial data structure and management - Vector data structure, Raster data structure,Creating database.

7. Creating maps – digitization – creating database, creating thematic maps – map furniture's.

References:

1.Singh. R.L:**Elements of Practical Geography,**Kalyani Publishers,New Delhi, 19791,Dehra Dun 1992.

2. Mishra R.P :**Fundamentals of Cartography,**1969, Prasaranga, University of Mysore, Mysore

3. Punmia. B.C, Jain : **Surveying**, Laxmi publications (p) Ltd. New Delhi – 2005

4. Singh. L.R : **Practical Geography**, Sharada Pustak Bhavan, Alahabad 2009

5. Burrough P.A : Principles of GIS , OUP, 1998.

6. Maguire D.J : Computer in Geography. Longman, London 1989.

7. Star J.C and J.E : Geographic Information Systems, An introduction

8. Kang – tsung –Chang : Introduction to Geographic Information Systems,Tata McGraw – Hill, NewDelhi – 2008

9. Tor Bernardsen : Geographic Information System, Wiley, NewDelhi – 2002.

10. Prithvish Nag and : Geographical Information System, Concept, NewDelhi- 2007, Smitha Guptha

11. Siddiqui. M.A : Introduction to Geographical Information,Systems, Sharada, Allahabad - 2009

Skill Enhancement Course (2 Compulsory Papers)

B.A III- Semester SEC –1 (Paper – I)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs

Credit 4:0:0 Total 2 credits

Title of the paper- Regional Planning and Development

1. Concept, Need and Types of Regional Planning. 8

2.Characteristics and Delineation of Planning Region. 10

3.Regionalization of India for Planning (Agro Ecological Zones). 12

4.Models for Regional Planning: Growth Pole Theory; Core Periphery Model and Growth Foci Concept in Indian Context. 15

5. Backward Regions and Regional Plans- Special Area Development Plans in India; DVC-The Success Story and the Failures; NITI Aayog. 15

Reading List

1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.
2. Claval P.l, 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press,
   Massachusetts.
4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory*,
   Policies and Practice of Development Intervention, Metropolis- Verlag, Marburg.
6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press,
   Massachusetts
8. Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
9. UNDP 2001-04: *Human Development Report,* Oxford University Press.
10. World Bank 2001-05: *World Development Report,* Oxford University Press, New

Skill Enhancement Course (2 Compulsory Papers)

B.A IV- Semester SEC- 2 (Paper – II)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs
Credit 4:0:0 Total 2 credits

Field Techniques and Survey based Project Report

1. Field Work in Geographical Studies – Role, Value and Ethics of Field-Work. 10
2. Defining the Field and Identifying the Case Study – Rural /Urban /Physical /Human /Environmental. 10
3. Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non Participant). 12
4. Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch). 16
5. Designing the Field Report – Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report. 12

Practical Record

1. Each student will prepare an individual report based on primary and secondary data collected during field work.
2. The duration of the field work should not exceed 10 days.
3. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.
4. One copy of the report on A 4 size paper should be submitted in soft binding.

Reading List

1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
2. Dikshit, R. D. 2003. The Art and Science of Geography: Integrated Readings. Prentice-Hall of India, New Delhi.
3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
4. Mukherjee, Neela 1993. Participatory Rural Appraisal: Methodology, and Application. Concept Publs. Co., New Delhi.
5. Mukherjee, Neela 2002. Participatory Learning and Action: with 100, Field Methods. Concept Publs. Co., New Delhi
6. Robinson A., 1998: "*Thinking Straight and Writing That Way*", in *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences*, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
7. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).
8. Stoddard R. H., 1982: *Field Techniques and Research Methods in Geography*, Kendall/Hunt.
9. Wolcott, H. 1995. The Art of Fieldwork. Alta Mira Press, Walnut Creek, CA.

Generic Elective (2 Compulsory Papers)

B.A V- Semester GE- 1 (Paper – I)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs
Credit 2:0:0 Total 2 credits

Title of the Paper: Introduction to physical geography (Credits - 2)

1. Geography – Divisions – physical geography - field and scope. Solar system – movements of the earth and effects. Rocks and their types.

2. Weathering and denudation – elements and factors

3. Atmospheric weather and climate: temperature and pressure, Winds and their types

4. Hydrosphere – ocean currents – temperature and salinity, Islands

References:

1. Dasagupta and Kapoor: Principles of Physical Geography, S.Chand and Co.New Delhi.2001.

2.Enayat Ahmed: Physical Geography, Kalayani Publishers, Ludhiana 1982.
3.Mallappa. P.: Physical Geography, (Kannada Version)-Chethana Book House,Mysore 2000.
4.Ranganath: Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2003.

5.Savindra Singh: Physical Geography, Pravag, Pustak Bhavan, Allahabad-1998.

Generic Elective (2 Compulsory Papers)

B.A V- Semester GE- 2 (Paper – 2)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs
Credit 2:0:0 Total 2 credits

Title of the Paper: Regional Geography of the world (Credits - 2)

1. Political division of the world- Continents- Oceans- Seas –Rivers

2. Natural regions of the world desimil classification. Major regions with reference to location. Extent places, climatic, vegetation, animal life and human activities

With reference to

i) Equatorial monsoon meditarian grassland, hot and cold deserts, tundra regions.

3. Economic activities -agricultural types - Mines- iron ,Power resources- coal, and petroleum. Industry, locations factors industrial regions

4. Population patterns of distribution -Transportation - continental railways, ocean routes.

References:

1. Heintzelman and High Smith: World Regional Geography. Prentice Hall, New Delhi 1965.

2. Husain .M : World Geography, Rawat, Jaipur, 2004.

3. Tikkha, Bali, Sekhon : World Regional Geography, New Academic Publishing Company, Jalandhar, 2002.

4. Ranganath : Regional Geography of world, Vidyanidhi, Gadag, 2009.

5.Ranganath : Principles of Human Geography, Vidyanidhi, Gadag, 2008.

6. Hartshorn.T.A and : Economic Geography, PHI, NewDelhi-2009, Alexander. J.W :

Generic Elective (2 Compulsory Papers)

B.A VI- Semester GE- 3 (Paper – 3)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs
Credit 2:0:0 Total 2 credits

Title of the Paper: Introduction to Human Geography (Credits 2)

1. Meaning and scope of human geography, Approaches of man – environment relationship, Environmental determinism, possibilism

2. Culture and cultural diversion –Race, Religion, Language

3. Major primitive tribal of the world – Eskimos ,khirghis, Todas, Bushman

4. Population – growth – demographic cycle – migrations causes and effects

References:

1. Dickens and Pitts : Introduction to Human Geography, 1963.

2. Harm d. Blij : Human and Economic Geography, Mac Millan,

New York, 1992.

3. Hussain M : Human Geography, Rawat Publications Jaipur, 2003.

4. Nelson, Gabler &

Vining : Human Geography, People, Cultures and Landscapes,1995.

5. Peter Daniels, Michael Bradshaw, Denis Shaw, James Sidaway: Human Geography, Issues for the 21 st Century , Pearson 2003.

6. Norris and Haring : Political Geography, Charles. E. Merill Publishing Company.

7. Ranganath : Principles of Human Geography (Kan. Ver.) Vidyanidhi, Gadag, 2002.

8. Rubenstein J.M : An Introduction to Human Geography, Macmillan Publishing Company 1992.

Generic Elective (2 Compulsory Papers)

B.A VI- Semester GE- 4 (Paper – 4)

(For Students admitted in 2017-18 and onwards)Teaching hours theory 4hrs

Credit 2:0:0 Total 2 credits

Title of the Paper: Regional Geography of India (Credits - 2)

1. Location and extent, physical features, rivers, climate, soils, natural vegetation

2. Population – growth, diversity, distribution,

3. Economy – Agricultural – major crops- minerals resources, Power resources- coal –petroleum, Electricity.

4. Industries – industrial regions – Iron and steel, cotton textiles, Fertilizers- cement

References:

1. Gopal Singh : A Geography of India, Atmarama and Sons, New Delhi.
2. ICAR : Cropping pattern in India, 1974.
3. Mathur, S.M. : Physical Geology of India, NBT 1991.
4. Ranganath : Regional and economic Geography of India (Kan.Ver) Vidyanidhi Gadag, 2006.
5. Ranjit Thirtha : Geography of India, Raniat, Jaipur 1996.
6. Khullar D.R. : India a Comprehensive Geography , Kalyani Publishers Ludhiana 2000.
7. Tiwari R.C : Geography of India, Prayag Pustak Bhawan, Allahabad 2 ed. 2003.

H. NAGARAJ
CHAIRMAN, BOS (PG & UG)

ದೂರವಾಣಿ ಸಂಖ್ಯೆ : 2419677/2419361
ಫ್ಯಾಕ್ಸ್: 0821–2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
ಸ್ಥಾಪನೆ : 1916

ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಕಾರ್ಯಸೌಧ
ಕ್ರಾಫರ್ಡ್ ಭವನ, ಮೈಸೂರು–570005

ಸಂಖ್ಯೆ:ಎಸಿ.6/32/2018–19

ದಿನಾಂಕ: 09.07.2018

ಅಧಿಸೂಚನೆ

ವಿಷಯ: 2018–19ನೇ ಸಾಲಿನಿಂದ CBCS ಅನುಸಾರ Constitution of India ವಿಷಯದ ಪರಿಷ್ಕೃತ ಪಠ್ಯಕ್ರಮ ಮತ್ತು ಪರೀಕ್ಷಾ ವಿಧಾನವನ್ನು ಜಾರಿಗೊಳಿಸುವ ಬಗೆಗೆ.

ಉಲ್ಲೇಖ: 1. ದಿನಾಂಕ 03–07–2018 ರಂದು ಜರುಗಿದ ರಾಜ್ಯಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮಂಡಳಿ (ಸ್ನಾತಕ)
2. ದಿನಾಂಕ: 19–06–2018 ರಂದು ಜರುಗಿದ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ತೀರ್ಮಾನ.

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ದಿನಾಂಕ 19–06–2018 ರಂದು ನಡೆದ ವಿದ್ಯಾವಿಷಯತ್ ಪರಿಷತ್ ಸಭೆಯ ನಿರ್ದೇಶನದಂತೆ, ದಿನಾಂಕ 03.07.2018 ರಂದು ಜರುಗಿದ ರಾಜ್ಯಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮಂಡಳಿ (ಸ್ನಾತಕ) ಸಭೆಯು 2018–19 ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ CBCS ಅನುಸಾರ Constitution of India ವಿಷಯದ ಪರಿಷ್ಕೃತ ಪಠ್ಯಕ್ರಮ ಮತ್ತು ಪರೀಕ್ಷಾ ವಿಧಾನವನ್ನು ಜಾರಿಗೊಳಿಸಲು ತೀರ್ಮಾನಿಸಿದೆ.

ಅದರಂತೆ, 2018–19ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಅಳವಡಿಸಿಕೊಳ್ಳಲು ಅಧಿಸೂಚನೆ ಹೊರಡಿಸಲಾಗಿದೆ.

ಮೇಲ್ಕಂಡ ಪಠ್ಯಕ್ರಮ ಹಾಗೂ ಇತರೆ ಅಂಶಗಳನ್ನು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ವೆಬ್‌ಸೈಟ್ **www.uni-mysore.ac.in** ಪಡೆಯಬಹುದಾಗಿದೆ.

ಉಪ ಕುಲಸಚಿವ(ಶೈಕ್ಷಣಿಕ)

ಕುಲಸಚಿವರಿಂದ ಕರಡು ಅನುಮೋದಿಸಿದೆ.

ಇವರಿಗೆ:

1. ಕುಲಸಚಿವರು (ಪರೀಕ್ಷಾಂಗ), ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು.
2. ಡೀನರು, ಕಲಾ ನಿಕಾಯ, ಇಂಗ್ಲಿಷ್ ಅಧ್ಯಯನ ವಿಭಾಗ, ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು.
3. ಅಧ್ಯಕ್ಷರು, ರಾಜ್ಯಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮಂಡಳಿ ರಾಜ್ಯಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ವಿಭಾಗ, ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು.
4. ಎಲ್ಲಾ ಪದವಿ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳಿಗೆ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು.
5. ನಿರ್ದೇಶಕರು, ಕಾಲೇಜು ಅಭಿವೃದ್ಧಿ ಮಂಡಳಿ, ಮೌಲ್ಯಭವನ, ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು.
6. ಉಪಕುಲಸಚಿವರು/ಸಹಾಯಕ ಕುಲಸಚಿವರು/ಅಧೀಕ್ಷಕರು, ಆಡಳಿತ ವಿಭಾಗ, ಪರೀಕ್ಷಾ ವಿಭಾಗ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು.
7. ಕುಲಪತಿ/ಕುಲಸಚಿವ/ಕುಲಸಚಿವ (ಪರೀಕ್ಷಾಂಗ), ಆಪ್ತಸಹಾಯಕರುಗಳು, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು.
8. ರಕ್ಷಾ ಕಡತಕ್ಕೆ.

University of Mysore.

Department of studies in Political Science, Manasagangotri, Mysore

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UG BOS Meeting in Political Science
Proceedings on CBCS Syllabus & Examination pattern

The UG BOS in Political Science, conducted a special meeting on 28th July, 2018 at the department of Political Science, Manasagangotri, University of Mysore, Mysuru. It has made the following resolutions with regard to CBCS syllabus, distribution lecture class and tutorial class and the pattern of Examination.

1. Resolved to follow L+T Model (Lecture + Tutorial Model) for all Discipline Specific Course papers [DSC], Discipline Specific Elective papers [DSE] and Ability Enhancement Compulsory Course Paper [AECC].

2. Resolved to make batches of students for tutorial classes in the best interest of effective learning. Tutorial class in the L-T-P component of CBCS is a session, where students are enabled to participate actively in the process of learning. For details see the implementation guidelines for UG CBCS, prepared by the University of Mysore, Mysore.

3. Resolved that the pattern adopted for Ability Enhancement Compulsory Course Paper [AECC] called Constitution of India is 2:2:0 =3 Credits. Two hours of Lecture for two Credits and two hours of tutorials of each 0.5 credit, which totally make 3 credits. There will be 2 Lecture classes for 2 credits and 2 Tutorial classes for 01 credit, which totally make 03credits for Constitution of India paper. One tutorial class is considered as one Teaching hour.

3. Resolved to follow earlier BOS resolutions relating to examination pattern, method of internal Assessment. Resolved to distribute lecture class and tutorial class for each paper as shown in the following table

Sem.	Title of the Paper	Weekly Hours L+T+P	Credits	Max. Marks
I or II SEM (AECC)	Constitution of India	2+2+0=4	3	80+20=100

Ability Enhancement Compulsory Paper (AECC)

I or II Semester

Constitution of India

==========

Unit- I- 1. Meaning and importance of Constitution

2. Making of Indian Constitution

3. Salient features and the Preamble

Unit- II- 1. Fundamental rights

2. Fundamental duties

3. Directive Principles

Unit - III- Union Government

1. Lok Sabha & Rajya Sabha (Composition, Powers & Functions)

2. President & Prime Minister (Powers,Functions, position)

3. Supreme Court-Composition, Powers & Functions

Unit – IV- Major Functionaries

1. Union Public Service Commission
2. Election Commission
3. Plannig Commission (NITI)

Books for reference-

1. Indian Constitution-Durga Das Basu.

2. Indian Constitution – M.V. Pylee.

3. Indian Government and Politics- J.C. Johri.

4. Indian Government- S.R. Maheshwari.

5. Indian Government and Politics- J.C. Joohri.

6. India's Constitution -- Faida

7. Indian Government and Politics - Dr. S.N. Dubey.

8. Indian Political System- R.C. Agarwal.

10. Indian Constitution --Vidhya Bhushan and Vishnu Bhagawan.

11. Bharathada sarkara matthu Rajakiya- Dr. H.M. Rajshekara

12. Bharathada sarkara matthu Rajakiya- Dr. K.J. Suresha.

Assessment Pattern of Constitution of India paper

Sl.No.	Method of assessment	Marks
01	C1 (Internal Assessment)	10
02	C2 (Internal Assessment)	10
03	C3 (Theory Examination)	80
04	Total Marks	100

CBCS

Question Paper pattern

Time: 3hours *Constitution of India* Max. Marks: 80

PART-A

Note: Answer any five questions. Each question carries ten marks.

5X10=50

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------
6. ----------
7. ----------
8. ----------

PART-B

Note: Answer any two questions. Each question carries fifteen marks

2X15=30

9. ----------

10. ----------

11. ----------

12. ----------

==========end==========

Tel. No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC.2(S)/31/18-19

Dated: 15.06.2018

NOTIFICATION

Sub: Revision of syllabus for Mathematics (UG) as per CBCS pattern from the academic year 2018-19.

Ref: 1. Decision of Board of Studies in Mathematics (UG) meeting held on 26.02.2018.
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.
3. Decision of the Deans Committee meeting held on 22.05.2018.

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The Board of Studies in Mathematics (UG) which met on 26th February, 2018 has recommended to revise the syllabus for B.Sc. Mathematics as per CBCS pattern from the academic year 2018-19.

The Faculty of Science and Technology and the Deans committee meetings held on 21-04-2018 and 22-05-2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The CBCS syllabus of B.Sc. Mathematics course is annexed. The contents may be downloaded **from the University Website i.e., www.uni-mysore.ac.in**.

Draft approved by the Registrar

Deputy Registrar(Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Physics, Manasagangotri, Mysore.
3. The Chairperson, BOS in Mathematics, DOS in Mathematics, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Mathematics, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Principals of the Affiliated Colleges where UG Program is running in Science stream.
7. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
9. Office file.

SYLLABUS FOR

B.Sc. MATHEMATICS
(CBCS SCHEME)

FROM THE ACADEMIC YEAR
2018-19

UNIVERSITY OF MYSORE
MYSURU

UNIVERSITY OF MYSORE

Choice Based Credit System (CBCS) and

Continuous Assessment and Grading Pattern (CAGP)

For Undergraduate Programs From 2018-19.

Preamble

University Grants Commission (UGC) has stressed on speedy and substantive academic and administrative reforms in higher education for promotion of quality and excellence. The Action Plan proposed by UGC outlines the need to consider and adopt Semester System, Choice Based Credit System (CBCS), and Flexibility in Curriculum Development and Examination Reforms in terms of adopting Continuous Evaluation Pattern by reducing the weightage on the semester end examination so that students enjoy learning environment with a lower stress. Further, UGC expects that institutions of higher learning draw a roadmap in a time bound manner to accomplish the above.

As per UGC guidelines, Academic Council of University of Mysore, in its meeting held on 21-09-2017 has decided to implement CBCS scheme in all undergraduate courses from the academic year 2018-2019. In this connection, a committee was formed to frame CBCS regulations and scheme of Examinations. As per CBCS regulations, Syllabus for B.Sc Mathematics and question paper pattern has been formed by the BOS (UG) in Mathematics in its meeting held on 26-02-2018 at Department of Studies in Mathematics, Manasagangotri, Mysuru-570 006.

1. Scheme of Admission: As per the University rules.
2. Eligibility: As prescribed by the University.
3. Scheme of Examination: Continuous assessment.

Evaluation Pattern:

For Discipline Specific Course (DSC) and Discipline Specific Elective (DSE) papers):

(i) Internal assessment

C1 Component: 10 Marks. This will be based on a theory test for 5 marks and a practical test for 5 marks. This should be completed by the 8^{th} week of the semester.

C2 Component: 10 Marks. This will be based on an assignment for 5 marks and 5 marks for writing practical record. This should be completed by the 15^{th} week of the semester.

(ii) C3 Component:

For Theory:
Main Examination of 3 hours duration: Max. Marks : 60

The pattern of the question paper will be as follows:

There will be 5 questions, each question carrying 12 marks. All questions must be answered.

Question 1. This question covers all the four units of the syllabus. There are 8 questions (Two questions shall be chosen from each unit) each carrying 2 marks. The candidate has to answer any 6 questions.

Question 2. This question covers Unit 1 of the syllabus. There will be 5 sub-questions each carrying 4 marks. The candidate has to answer any three of the 5 sub-questions.

Question 3. This question covers Unit 2 of the syllabus. There will be 5 sub-questions each carrying 4 marks. The candidate has to answer any three of the 5 sub-questions.

Question 4. This question covers Unit 3 of the syllabus. There will be 5 sub-questions each carrying 4 marks. The candidate has to answer any three of the 5 sub-questions.

Question 5. This question covers Unit 4 of the syllabus. There will be 5 sub-questions each carrying 4 marks. The candidate has to answer any three of the 5 sub-questions.

For Practicals:

Main Examination of 3 hours duration: Max Marks: 20

Two experiments will be given each carrying 10 marks.

For Skill Enhancement Course (SEC) papers:

(i) Internal assessment

C1 Component: 5 Marks. This will be based on test. This should be completed by the 8^{th} week of the semester.

C2 Component: 5 Marks. This will be based on assignment. This should be completed by the 15^{th} week of the semester.

(ii) C3 Component:

Main Examination of 2 hours duration: Max. Marks : 40

The pattern of the question paper will be as follows:

There are 3 questions. All questions must be answered. First question carries 10 marks and remaining questions carry 15 marks.

Question 1. This question covers all the two units of the syllabus. There are 6 questions (Three questions shall be chosen from each unit) each carrying 2 marks. The candidate has to answer any 5 questions.

Question 2. This question covers Unit 1 of the syllabus. There will be 5 sub-questions each carrying 5 marks. The candidate has to answer any three of the 5 sub-questions.

Question 3. This question covers Unit 2 of the syllabus. There will be 5 sub-questions each carrying 5 marks. The candidate has to answer any three of the 5 sub-questions.

4. Minimum marks for Securing Credits: As per CBCS regulations.
5. Minimum credits for getting B.Sc. Degree: As per CBCS regulations.
6. Award of degree: As per CBCS regulations.

Structure of B.Sc Mathematics papers

Sem-ester	Sl. No	Code	Title of the paper	Teaching/instructional class hrs/week	Credit Pattern L:T:P	Credit Value	Marks		
							C1	C2	C3
I	1	DSC – MATH-01	Algebra-I and Calculus-I	4 hrs	4:0:2	6	10	10	60
			Practicals-1	4 hrs					20
II	2	DSC – MATH-02	Calculus-II and Theory of Numbers	4 hrs	4:0:2	6	10	10	60
			Practicals-2	4 hrs					20
III	3	DSC – MATH-03	Algebra-II and Differential Equations	4 hrs	4:0:2	6	10	10	60
			Practicals-3	4 hrs					20
IV	4	DSC – MATH-04	Differential Equations-II and Real Analysis-I	4 hrs	4:0:2	6	10	10	60
			Practicals-4	4 hrs					20
V	5	DSE – MATH-01	Real Analysis-II and Algebra-III	4 hrs	4:0:2	6	10	10	60
			Practicals-5	4 hrs					20
	6	SEC – MATH - 01	Applied Mathematics	2hrs	2:0:0	2	5	5	40
	7	SEC – MATH - 02	Numerical Analysis	2hrs	2:0:0	2	5	5	40
VI	8	DSE – MATH-02	Algebra-IV and Complex Analysis-I	4 hrs	4:0:2	6	10	10	60
			Practicals-6	4 hrs					20
	9	SEC – MATH - 03	Complex Analysis-II and Improper Integrals	2hrs	2:0:0	2	5	5	40
	10	SEC – MATH - 04	Graph Theory	2hrs	2:0:0	2	5	5	40

SYLLABI FOR B.Sc. MATHEMATICS

I SEMESTER

DSC – MATH – 01 : ALGEBRA - I AND CALCULUS - I
(4 lecture hours/ week: 16 x 4 = 64 HOURS)

UNIT – I: Matrices (16 hrs)

Rank of a matrix – Elementary row/column operations – Invariance of rank under elementary operations – Inverse of a non-singular matrix by elementary operations.

System of m linear equations in n unknowns – Matrices associated with linear equations – trivial and non trivial solutions – Criterion for existence of non-trivial solution of homogeneous and non-homogeneous systems – Criterion for uniqueness of solutions.

Eigen values and eigenvectors of a square matrix – Properties – Diagonalization of a real symmetric matrix – Cayley - Hamilton theorem – Applications to determine the powers of square matrices and inverses of non-singular matrices.

UNIT – II: Theory of Equations (16 hrs)

Theory of equations – Euclid's algorithm – Polynomials with integral coefficients – Remainder theorem – Factor theorem – Fundamental theorem of algebra(statement only) – Irrational and complex roots occurring in conjugate pairs – Relation between roots and coefficients of a polynomial equation – Symmetric functions – Transformation – Reciprocal equations – Descartes' rule of signs – Multiple roots – Solving cubic equations by Cardon's method – Solving quartic equations by Descarte's Method.

UNIT III: Differential Calculus -I and Integral Calculus - I (16 hrs)

Derivative of a function - Derivatives of higher order – n^{th} derivatives of the functions: e^{ax}, $(ax + b)^n$, log(ax + b), sin(ax + b) , cos(ax + b), $e^{ax}\sin(bx+ c)$, $e^{ax}\cos(bx + c)$ – Problems, Leibnitz theorem – Monotonic functions – Maxima and Minima – Concavity Convexity and points of inflection.

Definite Integrals, properties and Reduction formulae.

UNIT IV: Differential Calculus -II (16 hrs)

Polar coordinates – angle between the radius vector and the tangent at a point on a curve – angle of intersection between two curves – Pedal equations – Derivative of arc length in Cartesian, Parametric and Polar form, Coordinates of center of curvature – Radius of curvature – Circle of curvature – Evolutes.

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Books for References:

1. Natarajan, Manicavasagam Pillay and Ganapathy – Algebra
2. Serge Lang – First Course in Calculus
3. Lipman Bers – Calculus, Volumes 1 and 2
4. N. Piskunov – Differential and Integral Calculus
5. B S Vatssa, Theory of Matrices, New Delhi: New Age International Publishers, 2005.
6. A R Vashista, Matrices, Krishna Prakashana Mandir, 2003.
7. G B Thomas and R L Finney, Calculus and analytical geometry, Addison Wesley, 1995.
8. J Edwards, An elementary treatise on the differential calculus: with Applications and numerous example, Reprint. Charleston, USA BiblioBazaar, 2010.
9. N P Bali, Differential Calculus, India: Laxmi Publications (P) Ltd.., 2010.
10. S Narayanan & T. K. Manicavachogam Pillay, Calculus.:S. Viswanathan Pvt. Ltd., vol. I & II 1996.
11. Frank Ayres and Elliott Mendelson, Schaum's Outline of Calculus, 5th ed.USA: Mc. Graw Hill., 2008.
12. Shanti Narayan and P K Mittal, Text book of Matrices, 5^{th} edition, New Delhi, S Chand and Co. Pvt. Ltd.,2013.
13. Shanthi Narayan and P K Mittal, Differential Calculus, Reprint. New Delhi: S Chand and Co. Pvt. Ltd., 2014.

PRACTICALS - 1
(4 hours/ week per batch of not more than 15 students)
Mathematics practical with Free and open Source Software (FOSS) tools for computer programs

Programs using Scilab/Maxima/Python:

1. Getting Started – Introduction.
2. Solving problems in Sets and Functions.
3. Solving problems in Algebra of Polynomials and Rational Functions.
4. Solving problems in Matrices – 1.
5. Solving problems in Matrices – 2.
6. Plotting 2D graphs.
7. Plotting 3D graphs.

II SEMESTER

DSC– MATH – 02 : CALCULUS - II AND THEORY OF NUMBERS
(4 lecture hours / week: 16 x 4 = 64 HOURS)

UNIT I: Limits and Continuity (16 hrs)

Limit of a function – Properties and problems, Continuity of functions – Properties and problems – Infimum and supremum of a function – Theorems on continuity – Intermediate value theorem.

UNIT II: Differential Calculus - III (16 hrs)

Rolle's theorem – Lagrange's Mean Value theorem – Cauchy's mean value theorem – Taylor's theorem – Maclaurin's theorem – Taylor's infinite series and power series expansion – Maclaurin's infinite series – Indeterminate forms.

UNIT III: Partial Derivatives (16 hrs)

Functions of two or more variables – Explicit and implicit functions – The neighbourhood of a point – The limit of a function – Continuity – Partial derivatives — Homogeneous functions – Euler's theorem – Chain rule – Change of variables – Directional derivative – Partial derivatives of higher order – Taylor's theorem for two variables – Derivatives of implicit functions – Jacobians – Some illustrative examples.

UNIT IV: Theory of Numbers (16 hrs)

Division Algorithm - Divisibility – Prime and composite numbers - Euclidean algorithm – fundamental theorem of Arithmetic – The greatest common divisor and least common multiple – congruences – Linear congruences –Simultaneous congruences – Wilson's, Euler's and Fermat's Theorems and their applications.

Books for References:

1. Serge Lang – First Course in Calculus
2. Lipman Bers – Calculus Volumes 1 and 2
3. N P Bali, Differential Calculus, India: Laxmi Publications (P) Ltd.., 2010.
4. S. Narayanan & T. K. Manicavachogam Pillay, Calculus, S. Viswanathan Pvt. Ltd., vol. I & II 1996.
5. G B Thomas and R L Finney, Calculus and analytical geometry, Addison Wesley, 1995.
6. David M Burton, Elementary Number Theory, 6th edition, McCraw Hill, 2007.
7. Emil Grosswald, Topics from the Theory of Numbers, Modern Birhauser, 1984.
8. Ivan Niven, Herbert S. Zuckerman and Hugh L. Montgomery, An Introduction to the Theory of Numbers, John Willey (New York), 1991.

PRACTICALS - 2
(4 hours/ week per batch of not more than 15 students)
Mathematics practical with Free and open Source Software (FOSS) tools for computer programs

Programs using Scilab/Maxima/Python:

1. Programming with Scilab/Maxima/Python – 1.
2. Programming with Scilab/Maxima/Python – 2.
3. Solving problems in Differentiation.
4. Solving problems in Integration.
5. Solving problems in Partial derivatives.
6. Solving problems in Limits & Continuity.
7. Solving problems in Number Theory.

III SEMESTER

DSC – MATH – 03 : ALGEBRA – II AND DIFFERENTIAL EQUATIONS
(4 lecture hours/week: 16 x 4 = 64 HOURS)

UNIT I: Group Theory I (16 hrs)

Definition and examples of groups – Some general properties of Groups, Group of permutations – Cyclic permutations – Even and odd permutations. Powers of an element of a group – Subgroups – Cyclic groups problems and theorems. Cosets, Index of a group, Lagrange's theorem, consequences.

UNIT II: Normal Subgroups and Homomorphism (16 hrs)

Normal Subgroups, Quotient groups – Homomorphism. – Kernel of homomorphism – Isomorphism - Automorphism – Fundamental theorem of homomorphism,

UNIT III: Differential Equations (16 hrs)

Recapitulation of Definition, examples of differential equations, formation of differential equations by elimination of arbitrary constants, Differential equations of first order- separation of variables, homogeneous differential equations. Exact differential equations, reducible to exact, Linear differential equations. The general solution of a linear equation – Integrating factors found by inspection. The determination of integrating factors, Bernoulli's equation.

UNIT IV: Ordinary Differential Equations (16 hrs)

Ordinary Linear differential equations with constant coefficients – Complementary function – particular integral – Inverse differential operators. Cauchy – Euler differential equations – Simultaneous differential equations (two variables with constant coefficients)

Books for References:

1. Daniel A Murray – Introductory Course to Differential equations
2. Earl David Rainville and Philip Edward Bedient – A short course in Differential equations, Prentice Hall College Div; 6th edition.
3. I N Herstien – Topics in Algebra.
4. Joseph Gallian – Contemporary Abstract Algebra, Narosa Publishing House, New Delhi, Fourth Edition.
5. G. D. Birkhoff and S Maclane – A brief Survey of Modern Algebra.
6. J B Fraleigh – A first course in Abstract Algebra.
7. Michael Artin – Algebra, 2nd ed. New Delhi, India: PHI Learning Pvt. Ltd., 2011.
8. Vashista, A First Course in Modern Algebra, 11th ed.: Krishna Prakasan Mandir, 1980.
9. R Balakrishan and N.Ramabadran, A Textbook of Modern Algebra, 1st ed. New Delhi, India: Vikas publishing house pvt. Ltd., 1991.
10. M D Raisinghania, Advanced Differential Equations, S Chand and Co. Pvt. Ltd., 2013.
11. F Ayres, Schaum's outline of theory and problems of Differential Equations, 1st ed. USA McGraw-Hill, 2010.
12. S Narayanan and T K Manicavachogam Pillay, Differential Equations .: S V Publishers Private Ltd., 1981.
13. G F Simmons, Differential equation with Applications and historical notes, 2nd ed.: McGraw-Hill Publishing Company, Oct 1991.
13. E Kreyszig- Advanced Engineering Mathematics, Wiley India Pvt. Ltd.

PRACTICALS - 3
(4 hours/ week per batch of not more than 15 students)
Mathematics practical with Free and open Source Software (FOSS) tools for computer programs

Programs using Scilab/maxima/Python

IV SEMESTER

DSC – MATH – 04 : DIFFERENTIAL EQUATIONS – II AND REAL ANALYSIS - I
(4 lecture hours/week: 16 x 4 = 64 HOURS)

UNIT I: Linear differential equations (16 hrs)

Solution of ordinary second order linear differential equations with variable coefficient by various methods such as :

(i) Changing the independent variable.
(ii) Changing the dependent variable.
(iii) By method of variation of parameters.
(iv) Exact equations.

Total differential equations - Necessary and sufficient condition for the equation Pdx + Qdy + Rdz = 0 to be exact (proof only for the necessary part) – Simultaneous equations of the form $\frac{dx}{P} = \frac{dy}{Q} = \frac{dz}{R}$.

UNIT II: Partial differential equations (16 hrs)

Basic concepts – Formation of a partial differential equations by elimination of arbitrary constants and functions – Solution of partial differential equations – Solution by Direct integration, Lagrange's linear equations of the form Pp + Qq = R , Standard types of first order non-linear partial differential equations – Charpit's method – Homogenous linear equations with constant coefficient – Rules for finding the complementary function – Rules for finding the particular integral, Method of separation of variables (product method).

UNIT III: Line and Multiple Integrals (16 hrs)

Definition of a line integral and basic properties – Examples on evaluation of line integrals – Definition of a double integral – Conversion to iterated integrals – Evaluation of double integrals under given limits - Evaluation of double integrals in regions bounded by given curves. Changing the order of integration, Change of variables from Cartesian to polar - Surface areas. Definition of a triple integral – Evaluation – Change of variables (Cylindrical and Spherical) – Volume as a triple integral.

Unit IV: Riemann integration (16 hrs)

The Riemann integral – Upper and lower sums – Criterion for integrability – Integrability of continuous functions and monotonic functions. Fundamental theorem of Calculus – Change of variables – Integration by parts – First and second mean value theorems of integral calculus.

Books for References:

1. G. Stephonson – An introduction to Partial Differential Equations.
2. B. S. Grewal – Higher Engineering Mathematics

3. E Kreyszig- Advanced Engineering Mathematics, Wiley India Pvt. Ltd.
4. E D Reinville and P E Bedient – A Short Course in Differential Equations
5. D A Murray – Introductory Course in Differential Equations.
6. G P Simmons – Differential Equations
7. F. Ayres – Differential Equations (Schaum Series)
8. Martin Brown – Application of Differential Equations.
9. M D Raisinghania, Advanced Differential Equations, S Chand and Co. Pvt. Ltd., 2013.
10. S C Malik –Real Analysis
11. Leadership project – Bombay university- Text book of mathematical analysis
12. S S Bali – Real analysis.

PRACTICALS - 4
(4 hours/ week per batch of not more than 15 students)
Mathematics practical with Free and open Source Software (FOSS) tools for computer programs

Programs using Scilab/maxima/Python

V SEMESTER

DSE – MATH – 01 : REAL ANALYSIS-II AND ALGEBRA - III
(4 lecture hours/week: 16 x 4 = 64 HOURS)

UNIT I: Sequences (16 hrs)

Sequence of real numbers – Bounded and unbounded sequences – Infimum and supremum of a sequence – Limit of a sequence – Sum, product and quotient of limits – Standard theorems on limits – Convergent , divergent and oscillatory sequences – Standard properties – Monotonic sequences and their properties – Cauchy's general principle of convergence.

UNIT II: Infinite Series (16 hrs)

Infinite series of real numbers – Convergence and Divergence - Oscillation of series – Properties of convergence – Series of positive terms – Geometric series – p – series – Comparison tests – D'Alembert's ratio test – Raabe's test – Cauchy's root test – Leibnitz's test for alternating series. Summation of Binomial, Exponential and Logarithmic series.

UNIT III: Rings and Fields (16 hrs)

Rings – Examples – Integral Domains – Division rings – Fields – Subrings. Subfields – Characteristic of a ring – Ordered integral domain – Imbedding of a ring into another ring – The field of quotients – Ideals – Algebra of Ideals – Principal ideal ring – Divisibility in an integral domain – Units and Associates – Prime elements

UNIT IV: Polynomial rings and Homomorphisms (16 hrs)

Polynomial rings – Divisibility – Irreducible polynomials – Division Algorithm – Greatest Common Divisors – Euclidean Algorithm – Unique factorization theorem – Prime fields – Quotient rings – Homomorphism of rings – Kernel of a ring homomorphism – Fundamental theorem of homomorphism – Maximal ideals – Prime ideals – Properties – Eisenstein's Criterion of irreducibility.

Books for References:

1. S.C Malik –Real Analysis
2. S.C.Malik and Savita Arora, Mathematical Analysis, 2nd ed. New Delhi, India: New Age international (P) Ltd., 1992
3. Richard R Goldberg, Methods of Real Analysis, Indian ed.
4. Asha Rani Singhal and M .K Singhal, A first course in Real Analysis
5. I. N. Herstien – Topics in Algebra.
6. G. D. Birkhoff and S Maclane – A brief Survey of Modern Algebra.
7. T. K. Manicavasagam Pillai and K S Narayanan – Modern Algebra Volume 2
8. J B Fraleigh – A first course in Abstract Algebra.
9. Robert G Bartle and Donald R Sherbert, Introduction to Real Analysis, John Wiley and Sons Inc., Fourth Ed.

PRACTICALS - 5
(4 hours/ week per batch of not more than 15 students)
Mathematics practical with Free and open Source Software (FOSS) tools for computer programs

Programs using Scilab/maxima/Python

V SEMESTER

SEC – MATH – 01 : APPLIED MATHEMATICS
(2 lecture hours/week: 16 x 2 = 32 HOURS)

UNIT I: **Laplace Transforms (16 hrs)**

Definition and basic properties – Laplace transforms of e^{kt}, cos kt, sin kt, a^t, t^n, cosh kt and sinh kt – Laplace transform of e^{at} F(t), t^n F(t), F(t)/t – problems – Laplace transform of derivatives of functions – Laplace transforms of integrals of functions – Laplace transforms of α-functions – Inverse Laplace transforms – problems.

Convolution theorem – Simple initial value problems – Solution of first and second order differential equations with constant coefficients by Laplace transform method.

UNIT II: Fourier series (16 hrs)

Introduction – Periodic functions – Fourier series and Euler formulae (statement only) – Even and odd functions – Half range series – Change of interval.

References

1. Murray R Speigel – Laplace Transforms
2. E Kreyszig- Advanced Engineering Mathematics, Wiley India Pvt. Ltd.
3. M D Raisinghania, Laplace and Fourier Transforms S. Chand publications.

V SEMESTER

SEC – MATH – 02 : NUMERICAL ANALYSIS
(2 lecture hours/week: 16 x 2 = 32 HOURS)

UNIT I: Numerical Analysis (16 hrs)

Numerical solutions of Algebraic and transcendental equations – Bisection method – The method of false position – Newton – Raphson method .

Numerical solutions of first order linear differential equations – Euler – Cauchy method – Euler's modified method – Runge -Kutta fourth order method – Picard's method.

UNIT II: Finite differences and Numerical integration (16 hrs)

Forward and backward differences – shift operator – Interpolation – Newton – Gregory forward and backward interpolation formulae – Lagrange's interpolation formula.

General quadrature formula – Trapezoidal Rule – Simpson's 1/3 rule – Simpson's 3/8 th rule, Weddle's rule.

Books for References:

1. B. D Gupta – Numerical Analysis
2. H. C Saxena – Finite Difference and Numerical Analysis
3. S. S. Shastry- Introductory Methods of Numerical Analysis
4. B. S. Grewal – Numerical Methods for Scientists and Engineers
5. M K Jain, S R K Iyengar, and R K Jain, Numerical Methods for Scientific and Engineering Computation, 4th ed. New Delhi, India: New Age International, 2012.
6. S S Sastry, Introductory methods of Numerical Analysis, Prentice Hall of India, 2012.
7. E Kreyszig- Advanced Engineering Mathematics, Wiley India Pvt. Ltd.

VI SEMESTER

DSE – MATH – 02 : ALGEBRA - IV AND COMPLEX ANALYSIS I
(4 lecture hours/week: 16 x 4 = 64 HOURS)

UNIT I: Vector Spaces (16 hrs)

Vector Spaces – Definition – Examples – Vector subspaces – Criterion for a subset to be a subspace – Algebra of Subspaces – Linear Combination – Linear Span – Linear dependence and linear Independence of vectors – Theorems on linear dependence and linear independence – Basis of a vector space – Dimension of a vector space — Some properties – Quotient spaces – Homomorphism of vector spaces– Isomorphism of vector spaces – Direct Sums.

UNIT II: Linear Transformations (16 hrs)

Linear transformation – Linear maps as matrices – Change of basis and effect of associated matrices – Kernel and image of a linear transformation – Rank and nullity theorem – Eigen values and Eigen vectors of a linear transformation.

UNIT III: Functions of a Complex Variable (16 hrs)

Equation to a circle and a straight line in complex form, Limit of a function – Continuity and differentiability – Analytic functions – Singular points – Cauchy-Riemann equations in Cartesian and polar forms – Necessary and sufficient condition for function to be analytic – Harmonic functions – Real and Imaginary parts of an analytic function are harmonic – Construction of analytic function i) Milne Thomson Method – ii) using the concept of Harmonic function.

UNIT IV: Transformations (16 hrs)

Definition – Jacobean of a transformation – Identity transformation – Reflection – Translation – Rotation – Stretching – Inversion – Linear transformation – Definitions – The Bilinear transformations – Cross Ratio of four points – cross ratio preserving property – Preservation of the family of straight lines and circles – conformal mappings – Discussion of the transformations $w = z^2$, $w = \sin z$. $w = e^z$, $w = \frac{1}{2}(z + 1/z)$.

Books for References:

1. I. N. Herstien – Topics in Algebra.
2. Stewart – Introduction to Linear Algebra
3. T. K. Manicavasagam Pillai and K S Narayanan – Modern Algebra Volume 2
4. S. Kumaresan – Linear Algebra
5. G. D. Birkhoff and S Maclane – A brief Survey of Modern Algebra.
6. Gopalakrishna – University Algebra
7. Saymour Lipschitz – Theory and Problems of Linear Algebra.

8. L. V. Ahlfors – Complex Analysis
9. Bruce P. Palka – Introduction to the Theory of Function of a Complex Variable
10. Serge Lang – Complex Analysis
11. Shanthinarayan – Theory of Functions of a Complex Variable
12. S. Ponnuswamy – Foundations of Complex Analysis
13. R. P. Boas – Invitation to Complex Analysis.
14. R V Churchil & J W Brown, Complex Variables and Applications, 5th ed.:McGraw Hill Companies., 1989.
15. A R Vashista, Complex Analysis, Krishna Prakashana Mandir, 2012.
16. Tristan Needham, Visual Complex Analysis, Clarendon Press Oxford.

PRACTICALS - 6
(4 hours/ week per batch of not more than 15 students)
Mathematics practical with Free and open Source Software (FOSS) tools for computer programs

Programs using Scilab/maxima/Python

VI SEMESTER

SEC – MATH – 03 : COMPLEX ANALYSIS II AND IMPROPER INTEGRALS
(2 lecture hours/week: 16 x 2 = 32 HOURS)

UNIT I: Complex Integration (16 hrs)

The complex Line integral – Examples and Properties – Proof of Cauchy's Integral theorem using Green's Theorem – Direct consequences of Cauchy's theorem – The Cauchy's integral formula for the function and the derivatives – Applications to the evaluations of simple line integrals – Cauchy's Inequality – Liouville's theorem – Fundamental theorem of Algebra.

UNIT II: Improper Integrals (16 hrs)

Improper Integrals (definition only) – Gamma and Beta functions and results following the definitions – Connection between Beta and gamma functions – Applications to evaluation of integrals – Duplication formula.

Books for References:

1. L. V. Ahlfors – Complex Analysis
2. Bruce P. Palka – Introduction to the Theory of Function of a Complex Variable
3. Serge Lang – Complex Analysis
4. Shanthinarayan – Theory of Functions of a Complex Variable
5. S. Ponnuswamy – Foundations of Complex Analysis
6. R P Boas – Invitation to Complex Analysis.
7. R V Churchil & J W Brown, Complex Variables and Applications, 5th ed.:McGraw Hill Companies., 1989.
8. A R Vashista, Complex Analysis, Krishna Prakashana Mandir, 2012.
9. Tristan Needham, Visual Complex Analysis, Clarendon Press Oxford.

VI SEMESTER

SEC – MATH – 04 : GRAPH THEORY
(2 lecture hours/week: 16 x 2 = 32 HOURS)

UNIT - I: Basics of Graph theory (16 hrs)

Basic Definitions, Isomorphism, Subgraphs, Operations on graphs, Walks, Paths, Circuits, Connected and disconnected graphs, Euler graphs, Hamiltonian graphs, Some Applications, Trees and Basic properties, Distance, Eccentricity, centre, Spanning trees, Minimal spanning tree.

UNIT - II: Cut- sets, Cut- vertices and Planar Graphs (16 hrs)

Cut- sets, Fundamental circuits; fundamental cut-sets, Connectivity, Separability, cut-vertex, Network flows, 1- and 2- Isomorphisms. Planar and non planar graphs, Euler's formula, Detection of planarity. Matrix representation of Graphs – Adjacency matrix of a graph, Incidence matrix of a graph.

Books for References:

1. Edgar G. Goodaire and Michael M. Parameter, Discrete Mathematics with Graph theory, 2nd Ed., Pearson Education(Singapore) P. Ltd., Indian Reprint, 2003.
2. Rudolf Lidl And Gunter Pilz, Applied Abstract Algebra, 2nd Ed., Undergraduate Texts in Mathematics, Springer (SIE), Indian reprint, 2004.
3. C.L. Liu – Elements of discrete mathematics, McGraw-Hill, 1986.
4. Kenneth H. Rosen – Discrete Mathematics and its applications, McGraw-Hill, 2002.
5. F Harary – Graph theory, Addison Wesley, Reading Mass, 1969.
6. N Deo – Graph theory with applications to Engineering and Computer Science, Prentice Hall of India, 1987.
7. K R Parthasarathy – Basic Graph theory, Tata McGraw-Hill, New Delhi, 1994.

8. D B West – Introduction to Graph theory, Pearson Education inc., 2001, 2nd Ed.
9. J A Bondy and U S R Murthy – Graph theory with applications, Elsevier, 1976.

Useful web links:

1. http://www.cs.columbia.edu/~zeph/3203s04/lectures.html
2. http://home.scarlet.be/math/matr.htm
3. http://www.themathpage.com/
4. http://www.abstractmath.org/
5. http://ocw.mit.edu/courses/mathematics/
6. http://planetmath.org/encyclopedia/TopicsOnCalculus.html
7. http://mathworld.wolfram.com/
8. http://www.univie.ac.at/future.media/moe/galerie.html
9. http://www.mathcs.org/
10. http://www.amtp.cam.ac.uk/lab/people/sd/lectures/nummeth98/index.htm
11. http://math.fullerton.edu/mathews/numerical.html
12. http://www.onesmartclick.com/engineering/numerical-methods.html
13. http://www.math.gatech.edu/~harrell/calc/
14. http://tutorial.math.lamar.edu/classes/de/de.aspx
15. http://www.sosmath.com/diffeq/diffeq.html
16. http://www.analyzemath.com/calculus/Differential_Equations/applications.html
17. http://www.math.gatech.edu/~harrell/calc/
18. http://www.amtp.cam.ac.uk/lab/people/sd/lectures/nummeth98/index.htm
19. http://www.fourier-series.com/
20. http://www.princeton.edu/~rvdb
21. http://www.zweigmedia.com/RealWorld/Summary4.html
22. http://www.math.unl.edu/~webnotes/contents/chapters.htm
23. http://www-groups.mcs.st-andrews.ac.uk/~john/analysis/index.html
24. http://web01.shu.edu/projects/reals/index.html

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Tel. No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC.2(S)/31/18-19

Dated: 15.06.2018

NOTIFICATION

Sub: Revision of syllabus for Computer Science (UG) as per CBCS pattern from the academic year 2018-19.

Ref: 1. Decision of Board of Studies in Computer Science (UG) meeting held on 28.02.2018.
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.
3. Decision of the Deans Committee meeting held on 22.05.2018.

*****

The Board of Studies in Computer Science (UG) which met on 28.02.2018 has recommended to revise the syllabus for B.Sc. Computer Science as per CBCS pattern from the academic year 2018-19.

The Faculty of Science and Technology and the Deans committee meetings held on 21-04-2018 and 22-05-2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The CBCS syllabus of B.Sc. Computer Science course is annexed. The contents may be downloaded **from the University Website i.e., www.uni-mysore.ac.in**.

Draft approved by the Registrar

15/6

Deputy Registrar(Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Physics, Manasagangotri, Mysore.
3. The Chairperson, BOS in Computer Science, DOS in Computer Science, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Computer Science, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Principals of the Affiliated Colleges where UG Program is running in Science stream.
7. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
9. Office file.

Open Elective 1: Web Design (HTML)

2 Hrs/Week Max Hours:30

Unit I:

The World Wide Web (WWW) and history of HTML, Hypertext and Hypertext Markup Language, Why HTML, Prerequisites.
Dividing the document into 2 parts, Headers tags, Body tags, Delimiters, Tags, Elements, Attributes, Elements of an HTML Document , Text Elements, Tag Elements, Special Character elements, HTML Comments.

Header tags, Body tags, Heading tags, Inserting horizontal lines, Paragraphs, Breaks, Titles, Lists: Numbered List, Non-Numbered list, Definition list, Nested list, Marquee.

Unit II:

Logical styles (source code, text enhancements, variables), Physical Styles (Bold, Italic, underlined, crossed)

Image format (quality, size, type …), Importing images (scanners), Tags used to insert images, Frames, Hyperlinks.

Unit IIITags used in table definition, Tags used for border thickness, Tags used for cell spacing, Tags used for table size, Dividing table with lines, Dividing lines with cells. Cell types: Titles cell, Data cell.

Reference :

1. Robert W.Sebesta: Programming the World Wide Web, 4th Edition, Pearson Education, 2008

2. Web programming: Srikanth S, Skyward Publishers.

Open Elective 2: C Programming Language

2 Hrs/Week Max Hours:30

Unit I:

Introduction, System software, Application software. Program Translators – Assembler, Interpreter and Compiler. Programming languages -Machine Level language, Assembly level language, High level language, Compare and contrast – Advantages and disadvantages.

Algorithm- Features, Advantages & disadvantages of algorithm, Flowchart – Symbols used in a flowchart, Steps involved in developing a flowchart with suitable examples, Advantages & disadvantages of flowchart.

Unit II:
Introduction to C programming, features of C language, applications of C, advantages of C. Structure of C program and execution of C program.

C character set, C tokens: identifiers, keywords, variables, constants and operators . Types of constants- integer constants, float constants, single character constants and string constants Basic data types – int, char, float and double. Qualifiers – short, long, signed and unsigned. Declaration of variables, Assigning values to variables, Defining symbolic constants, Data type conversion: implicit and explicit. Operators-Arithmetic, Assignment, Relational, Logical, Conditional, Bitwise and Special operators. Expressions - Arithmetic expressions, Relational expressions, Logical expressions.

Formatted and Unformatted Input/output functions. Format specifier for integers, floating point numbers, characters and strings. Escape sequences.

Types of controls structures-Conditional Statements-Simple if, if-else, nested if, else-if ladder, switch statements. Looping- while, do-while, for loop.

Reference Books:

1. Problem Solving with C -PHI(EEE). By - M.T.Somashekara.

2. Programming with C (Second edition) Byron S Gottfried , Schaum's Outlines (TMH)

3. Programming with C by K.R. Venugopal, Sudeep R Prasad TMH Outlines Series

4. Programming in ANSI C by Ram Kumar, Rakesh agrawal, TMH

5. Let us C by Yashwant Kanetkar, BPB

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www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

No.AC.2(S)/31/18-19

Dated: 15.06.2018

NOTIFICATION

Sub: Revision of syllabus for Physics (UG) as per CBCS pattern from the academic year 2018-19.

Ref: 1. Decision of Board of Studies in Physics (UG) meeting held on 05.03.2018.
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.
3. Decision of the Deans Committee meeting held on 22.05.2018.

*****

The Board of Studies in Physics (UG) which met on 05th March, 2018 has recommended to revise the syllabus for B.Sc. Physics as per CBCS pattern from the academic year 2018-19.

The Faculty of Science and Technology and the Deans committee meetings held on 21-04-2018 and 22-05-2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The CBCS syllabus of B.Sc. Physics course is annexed. The contents may be downloaded **from the University Website i.e., www.uni-mysore.ac.in**.

Draft approved by the Registrar

Deputy Registrar(Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Physics, Manasagangotri, Mysore.
3. The Chairperson, BOS in Physics, DOS in Physics, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Physics, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Principals of the Affiliated Colleges where UG Program is running in Science stream.
7. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
9. Office file.

University of Mysore

Proposed Syllabus for the Six Semesters

B.Sc. (Physics)

Choice Based Credit Scheme 2018

Credit Pattern for Courses

L: Lecture; T: Tutorial; P: Practicals

Sem	Type	Id	Course	L + T + P = Tot.
1	DSC	PHY101	Mechanics, Properties of Matter and Electrostatics	4 + 0 + 0 = 4
1	DSC	PHY102	Practical 1	0 + 0 + 2 = 2
2	DSC	PHY201	Heat, Thermodynamics and Sound	4 + 0 + 0 = 4
2	DSC	PHY202	Practical 2	0 + 0 + 2 = 2
3	DSC	PHY301	Electricity and Electromagnetism	4 + 0 + 0 = 4
3	DSC	PHY302	Practical 3	0 + 0 + 2 = 2
4	DSC	PHY401	Optics and Spectroscopy	4 + 0 + 0 = 4
4	DSC	PHY402	Practical 4	0 + 0 + 2 = 2
5	DSE	PHY501	Nuclear and Theoretical Physics	3 + 0 + 0 = 3
5	DSE	PHY502	Practical 5	0 + 0 + 1.5 = 1.5
5	DSE	PHY503	Practical 6	0 + 0 + 1.5 = 1.5
5	SEC	PHY511	Lasers and Fibre Optics	2 + 0 + 0 = 2
5	SEC	PHY512	Astronomy and Astrophysics	2 + 0 + 0 = 2
5	SEC	PHY513	Nano Materials	2 + 0 + 0 = 2
6	DSE	PHY601	Solid State Physics	3 + 0 + 0 = 3
6	DSE	PHY602	Practical 7	0 + 0 + 1.5 = 1.5
6	DSE	PHY603	Practical 8	0 + 0 + 1.5 = 1.5
6	SEC	PHY611	Optoelectronics	2 + 0 + 0 = 2
6	SEC	PHY612	Renewable Energy Sources	2 + 0 + 0 = 2
6	SEC	PHY613	Solving Problems in Physics	2 + 0 + 0 = 2

Credit means the unit by which the course work is measured. One hour session of Lecture or Tutorial per week for 16 weeks amounts to 1 credit. Two hours session of Practicals per week for 16 weeks amounts to 1 credit per semester.

PHY101 (DSC) Mechanics, Properties of Matter and Electrostatics

Course duration: 16 weeks with 4 hours of instruction per week.

Part A: 32 hours

Frames of reference: Inertial reference frames with examples. Uniform rectilinear motion in an inertial frame—Galilean transformation equation. The Galilean principle of relativity. Motion in a non-inertial reference frame uniformly accelerated rectilinear motion-concept of fictitious force-illustration; plumb line accelerometer and a freely falling elevator. Qualitative discussion of centrifugal force, Coriolis force and earth as a non-inertial frame, Numerical problems. [5 hours]

Motion of a point particle: Point mass. The position vector $\vec{r}(t)$ of a moving point particle and its cartesian components. Velocity and acceleration as the vector derivatives. Derivation of planar vector of a constant magnitude. Radial and transverse components of velocity and acceleration for arbitrary planar motion, deduction of results for uniform circular motion centripetal force, Numerical problems. [4 hours]

Rigid body dynamics: Review of definitions, Moment of inertia and radius of gyration. Review of statements of the theorems of the parallel and perpendicular axes. Expression for kinetic energy of a rigid body. Calculation of moment of inertia of thin uniform rod, rectangular lamina, circular lamina, and solid cylinder. Theory of compound pendulum. Numerical problems. [6 hours]

Conservation of linear momentum: Conservation of the linear momentum for a system of two particles. Rocket motion in a uniform gravitational field (single stage rocket equation with and without gravity). Multistage rocket—elementary ideas. Elastic and inelastic collisions—Elastic head-on collision and elastic oblique collision in a lab frame, Reduced mass. Numerical problems. [6 hours]

Conservation of angular momentum: Review of angular momentum and Torque. Relation between angular momentum and torque. Law of conservation of angular momentum. Areal velocity derivation $\mathrm{d}A/\mathrm{d}t = {}^1\!/_2\, r^2\dot{\theta}\,\hat{n}$. Central

force: Physical insight into the nature of central forces. Kepler's laws of planetary motion—derivation using Newton's law of gravitation. Numerical problems. [5 hours]

Conservation of energy: Conservative force and non conservative forces with examples. Conservation of energy in a conservative force field. Applications: (i) Vertical oscillations of a loaded light spiral spring and (ii) Calculation of escape velocity in the gravitational field of the earth. Conditions for a geo-stationary satellite. Numerical problems. [6 hours]

Part B: 32 hours

Fluid Mechanics: Viscosity—Basic concepts, Variation of viscosity of liquids with temperature and pressure. Theory of rotation viscometer. [3 hours]

Surface Tension: Basic concepts. Pressure inside curved liquid surface, examples. Surface tension and interfacial tension by drop-weight method. Surface tension of mercury by Quincke's method—Theory Numerical problems. [5 hours]

Elasticity: Concepts of moduli of elasticity, Hooke's Law and Poisson's ratio σ. Relation between the elastic constants q, k, n and σ, limiting values for σ. Work done in stretching. Elastic potential energy. Bending moment. Theory of light single cantilever. I-section girders. Torsion—calculation of couple per unit twist. The Torsional pendulum, Static torsion, Searle's double bar experiment. Numerical problems. [12 hours]

Electrostatics: Mechanical force and electric pressure on a charged surface. The path traced by a charged particle in an electric field. The attracted disc electrometer—construction, theory and applications. Numerical problems. [6 hours]

Galvanometers: Moving coil galvanometer—construction, theory, damping correction, current sensitivity and charge sensitivity. Helmholtz galvanometer—Theory. Numerical problems. [6 hours]

References

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PHY102 (DSC) Practical 1

Course duration: 16 weeks with 4 hours of lab work per week.

Any TEN of the following experiments:

1. Bar pendulum: Determination of the acceleration due to gravity and radius of gyration (graphical method).
2. Fly wheel: Determination of moment of inertia, mass and density.
3. Drop weight method: Determination of surface tension of liquid and
4. Drop weight method: Determination the interfacial tension between two liquids.
5. Quincke's method: Determination of surface tension and angle of contact of mercury.
6. Young's modulus: Single cantilever method using travelling microscope; Graphical Method.
7. Searle's double bar: Determination of Young's modulus.
8. Searle's double bar: Determination rigidity modulus and Poisson's ratio (assuming q).
9. Torsional pendulum: Determination of the rigidity modulus
10. Determination of the Young's modulus by Dynamic method (using graph).

11. Spiral spring: Determination of the acceleration due to gravity (graphical method).
12. Determionation of Radius of Gyration and Moment of Inertia of a rectangular body in three different axis.

PHY201 (DSC) Heat, Thermodynamics and Sound

Course duration: 16 weeks with 4 hours of instruction per week.

Part A: 32 hours

Kinetic theory: Maxwell's law of distribution of molecular velocity (no derivation); its interpretation. Degrees of freedom. Principle of equipartition of energy based on Kinetic theory of gases. Derivation of $U = 3/2RT$. Mean free path, Probability of a particle having mean free path. Real gases, Andrew's isothermal, Van der Waals equations—expression for critical constants, calculation of mean velocity, most probable velocity and RMS velocity. Numerical problems. [8 hours]

Thermal conductivity: Equation for the flow of heat through a solid bar. Determination of thermal conductivity of a bad conductor by Lee and Charlton method. Numerical problems. [3 hours]

Radiation: Planck's quantum theory of radiation.Induced and spontaneous emission of radiation. Derivation of Planck's law of radiation using Einstein's A and B coefficients. Deduction of Rayleigh-Jeans law, Stefan's law and Wien's displacement law from Planck's law. Numerical problems. [6 hours]

Low temperature physics: Ideal gas and real gas. Van der Waals equation of state. Porous plug experiment and its theory. Joule-Thomson expansion—expression for the temperature of inversion, inversion curve. Relation between Boyle temperature, temperature of inversion and critical temperature of a gas. Principle of regenerative cooling. Liquefaction of air by Linde's method. Adiabatic demagnetization. Numerical problems. [8 hours]

Thermodynamics: Review of basic concepts, Carnot's theorem, thermodynamic scale of temperature and its identity with perfect gas scale. Clausius-

Clapeyron first Latent heat equation, effect of pressure on melting point of a solid, effect of pressure on boiling point of a liquid. Numerical problems. [7 hours]

Part B: 32 hours

Entropy: The concept of entropy. Change of entropy in reversible and irreversible cycles. Entropy and nonavailable energy. Second law of thermodynamics in terms of Entropy. Entropy of ideal gas, Entropy of Steam and Mixtures.T-S diagram, concept of absolute zero and the third law of thermodynamics. Numerical problems. [7 hours]

Thermodynamic potentials and Maxwell's thermodynamic relations: Internal Energy, Enthalpy, Helmholtz function, Gibbs function, relations among these functions, Gibbs-Helmholtz equations. Derivation of Maxwell's thermodynamic relations, Tds equations for Cp and Cv, Heat capacity equations. Numerical problems. [8 hours]

Sound: Waves in one dimension—Differential equation of wave motion , Expression for velocity of progressive waves in a medium, Laplace's Correction to Newton's formula. Expression for frequency of vibration of a stretched string—harmonics, Longitudinal vibrations in a rod. Kundt's tube experiment, Numerical problems. [7 hours]

Analysis of complex waves: The Fourier series—evaluation of Fourier coefficients, Example of the square wave, saw tooth wave. [4 hours]

Superposition of simple harmonic motion—Lissajous' figures. Equation for damped vibrations. Forced vibration, solution in exponential form, Resonance, Expression for amplitude and phase at resonance. Numerical problems. [6 hours]

References

- Halliday D, Resnick R, and Walker J, *Principles of Physics*, 9th Edn., Wiley (2013).
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PHY202 (DSC) Practical 2

Course duration: 16 weeks with 4 hours of lab work per week.

Any TEN of the following experiments:

1. Verification of Gaussian distribution law and calculation of standard deviation—Monte Carlo experiment.
2. Specific heat of a liquid by cooling—graphical method.
3. Determination of thermal conductivity of a bad conductor by Lee-Charlton method.
4. Verification of Stefan-Boltzmann law using meter bridge or a potentiometer.
5. Determination of boiling point of a liquid using platinum resistance thermometer.
6. Determination of moment of inertia of irregular body using torsional pendulum.
7. Determination of Young's modulus by Koenig's method.
8. Determination of rigidity modulus by the static torsion method.
9. Determination of Young's modulus by uniform bending method travelling microscope (using graph).
10. Kundt's tube experiment—velocity of sound in air at room temperature.

11. Study of stationary wave on a stretched string—Determination of speed of the transverse waves over the sonometer wire.
12. Helmholtz resonator—Determination of frequency of a tuning fork.

PHY301 (DSC) Electricity and Electromagnetism

Course duration: 16 weeks with 4 hours of instruction per week.

Part A: 32 hours

Thermoelectricity: The Thermocouple. Seebeck, Peltier and Thomson effects. Thermodynamic theory of thermoelectric effect. Neutral temperature. Temperature of inversion, The law of intermediate metals, and the law of intermediate temperatures. Numerical problems. [6 hours]

Network Theorems: Mesh analysis circuits using KVL and KCL. Statement and proof of Thevenin's theorem, Norton's theorem, and Superposition theorem. Applications to DC circuits. Numerical problems. [9 hours]

Electromagnetism: Scalar and Vector fields. The gradient of a scalar field. The divergence and curl of a vector field. The physical significance of gradient, divergence and curl. Statement and theorems of Gauss and Stokes. Numerical problems. [5 hours]

Electromagnetic theory: Equation of continuity, Maxwell's modification of Ampere circuital law; Displacement current. Setting up of Maxwell's field equations. Maxwell's field equations in free space, Poynting vector (definition). Wave equation for the field vectors in free space and in isotropic dielectric. Energy density of electromagnetic wave and Poynting Theorem (Proof). Plane monochromatic electromagnetic waves—Transverse nature. Helmholtz equation. Characteristic impedance of free space. Accelerated charges and oscillating dipole. Hertz's experiment. Radiation loss—Synchrotron radiation. Numerical problems. [12 hours]

Part B: 32 hours

CRO: Construction and working. Measurement of voltage, frequency and phase using a CRO. [3 hours]

DC currents: Growth and decay of Current in RL, RC, and RLC Circuits, Numerical problems. [6 hours]

Alternating current: Average, Peak, and RMS values. Response of LR, CR, and LCR circuits to sinusoidal voltages (discussion using the 'j' symbols). Series Resonance and parallel resonance—half-power frequencies, bandwidth and Q-factor. Power in electrical circuits—power factor. Maximum power transfer theorem for ac circuits (statement and proof). Numerical problems. [11 hours]

Applications of ac circuits: i) ac bridges—Anderson's bridge, Maxwell's bridge, de Sauty bridge, Robinson's bridge. Numerical problems. [6 hours]

ii) Frequency filters—High-pass and low-pass filters with LC, LR, and CR combinations. Expression for cut-off frequency. Band pass filters. Numerical problems including designing the filters. [6 hours]

References

- Tewari K K, *Electricity and Magnetism*, Revised Edn., S Chand and Company (2007).
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PHY302 (DSC) Practical 3

Course duration: 16 weeks with 4 hours of lab work per week.

Any TEN of the following experiments:

1. Anderson's bridge—Determination of the self-inductance of the coil.
2. de-Sauty bridge—Verification of laws of combination of capacitances.

3. Maxwells bridge.
4. B_H using Helmholtz double coil galvanometer and potentiometer.
5. LCR series circuit—Determination of L and Q-factor.
6. Voltage triangle—Measurement of phase difference.
7. Low and High pass filters—Determination of the cut-off frequency.
8. LCR parallel circuit—Determination of L and Q-factor.
9. To study the variation of X_C with f and determination of C.
10. CRO—determination of voltage and frequency.
11. High resistance by leakage method.
12. Measurement of low resistance using potentiometer.

PHY401 (DSC) Optics and Spectroscopy

Course duration: 16 weeks with 4 hours of instruction per week.

Part A: 32 hours

Interference: Concept of coherent sources. Interference by division of wave front—Theory of Fresnel's biprism, Interference by division of amplitude—Thin films of uniform thickness, anti-reflective coatings, Newton's rings. Interference at a wedge. Michelson's interferometer—Measurement of λ and $\mathrm{d}\lambda$. Numerical problems. [8 hours]

Diffraction: Fresnel and Fraunhofer diffraction. Explanation of rectilinear propagation of light. Theory of the zone plate. Comparison with a convex lens. Fresnel diffraction at a straight edge. Fraunhofer diffraction at a single slit. Transmission grating—theory for the case of normal incidence, resolving power and dispersive power of plane grating. Numerical problems. [8 hours]

Polarization: Double refraction in uniaxial crystals. Huygen's theory. Positive and negative crystal. Principal refractive indices. Huygen's constructions of O and E wave fronts in a uniaxial crystal—(i) optic axis in the plane of incidence and parallel to the crystal surface at normal incidence, (ii) optic axis in the plane of incidence and perpendicular to the crystal surface at normal incidence. Retarding plates. Production and analysis of linearly, Circularly and elliptically polarized light. Optical activity, Fresnel's theory, Rotatory polarization. Use of biquartz. Elementary idea of Babinet compensator, Interference of polarized

light-Expression for resultant intensity, calculation of thickness of wedge shaped crystal plate(negative and positive), calculation of fringe width. Numerical problems. [11 hours]

Lasers: Properties, Metastable state. Spontaneous emission, stimulated emission, population inversion. Three level laser. The He-Ne laser, Ruby laser. Laser applications: Nuclear fusion, medical, communications, and industrial applications. [5 hours]

Part B: 32 hours

The Electron: Determination of e/m of an electron by Thomson's method. Determination of charge of an electron by Millikan's oil drop method. Numerical problems. [4 hours]

Atomic Spectra: A qualitative account of Sommerfeld relativistic atom model. Excitation and Ionization potentials—Franck-Hertz experiment. Vector model of atom. Electron spin. Space quantization. Magnetic moment of an electron due to its orbital motion. Stern-Gerlach experiment. Spin-orbit interaction and the fine structure of spectral lines. Quantum number and selection rules. Pauli's exclusion principle. Electronic configuration of atoms. Valance electron. Brief mention of LS and JJ coupling for multi-electron atoms. [12 hours]

Zeeman effect: Normal and anomalous effects, Experimental details of normal Zeeman effect, explanation of normal Zeeman effect on the basis of classical model, expression for the Zeeman shift. Numerical problems. [4 hours]

Molecular spectra and The Raman effect: Rotation, vibration and electronic spectra of molecules, associated quantum numbers and selection rules. Theory of pure rotation spectra. Theory of rotational-vibrational spectra. Raman effect—Salient features, experimental setup to study Raman effect. Quantum Theory of Raman effect; Intensity and polarization of Raman lines; Applications. Fluorescence and phosphorescence. Numerical problems. [12 hours]

References

- Bhattacharya A B, and Bhattacharya R,*Undergraduate Physics*, Vol. 2, New Central Book Agency (2008).

- Subrahmanyam N, Brij Lal, and Avadhanulu M N, *A Textbook of Optics*, 24th Revised Edn., S Chand and Company (2015).
- Satya Prakash, *Optics and Atomic Physics*, 8th Revised Edn., Ratan Prakashan Mandir (1988).
- Ashok Kumar, Khanna D R, and Gulati H.R, *Fundamentals of Optics*, 15th Edn., R Chand Publishers (2011).
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PHY402 (DSC) Practical 4

Course duration: 16 weeks with 4 hours of lab work per week.

Any TEN of the following experiments:

1. Newton's rings—Determination of radius of curvature of a plano convex lens.
2. Air wedge—Determination of thickness of a thin paper/diameter of a thin wire.
3. Diffraction grating—Determination of grating constant and wavelength (minimum deviation method).
4. Diffraction at a straight wire—Determination of diameter of a wire.
5. Cauchy's constants using spectrometer.
6. Polarization—Determination of unknown concentration of sugar solution by graphical method using a polarimeter.
7. Determination of refractive indices of calcite and quartz crystal using spectrometer and sodium light.
8. Determination of resistance using time constant of RC circuit by discharging process.
9. Biprism—determination of wavelength.
10. Determination of capacitance using time constant of RC circuit by charging process.
11. Study of hydrogen spectrum using gas discharge tube—Determination of Rydberg constant.
12. Resolving power of plane transmission grating using spectrometer.

PHY501 (DSE) Nuclear and Theoretical Physics

Course duration: 16 weeks with 3 hours of instruction per week.

Part A: 16 hours

Special theory of relativity: Michelson-Morley experiment and its outcome. Postulates of Special Theory of Relativity. Lorentz transformations (no derivation). Lorentz contraction. Time dilation. Relativistic transformation of velocity, Relativistic addition of velocities. Variation of mass with velocity. Rest mass. Massless particles. Mass energy equivalence, $E = mc^2$. The energy-momentum relation. The principle of equivalence. [8 hours]

Cosmic rays and particle physics: Cosmic ray discovery; Primary and secondary cosmic rays—their composition. Cosmic ray showers. Origin of cosmic rays, Mention of the basic interactions in nature; Particles and anti-particles. Types of interaction between elementary particles, Classification of particles. Conservation laws. A qualitative introduction to quarks (quark model). Numerical problems. [4 hours]

Mass spectrographs: Theory of Dempster and Aston mass spectrograph. Numerical problems. [2 hours]

Nuclear detectors: Bubble chamber. GM counter. Principle of semiconductor detector. [2 hours]

Part B: 16 hours

The nucleus: Properties of nucleus. Discovery of neutron. The proton-neutron hypothesis. Nuclear forces and their characteristics. Yukawa's theory (qualitative). [2 hours]

Radioactive decay: Successive disintegration, Radioactive equilibrium, Range and energy of alpha-particle and their measurements. Theory of alpha-decay (qualitative). Geiger-Nuttal law. Beta Decay—Pauli's neutrino hypothesis, K-electron capture, internal conversion. Nuclear isomerism. Mirror nuclei. Numerical problems. [4 hours]

Accelerators: Cockroft-Walton voltage multiplier, Cyclotron, and Betatron. Numerical problems. [3 hours]

Nuclear reactions: Q-values. Threshold energy of an endoergic reaction. Reactions induced by proton, deuteron and particles. Numerical problems. [2 hours]

Nuclear models: Liquid-drop model. Semi-empirical mass formula. Shell model, and magic numbers. Numerical problems. [2 hours]

Nuclear fission, and fusion: Estimation of the fission energy on the basis of the liquid drop model, The four-factor formula, Thermo-nuclear reactions-sources of stellar energy. The C-N cycle, Numerical problems. [3 hours]

Part C: 16 hours

Matter waves: Failure of classical mechanics in the microscopic domain. Black body radiation, Hydrogen atom, Specific heats of solids, Fine structure of spectral lines, Particle and wave nature in classical mechanics. Dual nature of light and Matter, de Broglie's concept of matter waves, Expression for de Broglie's wave, Phase and group velocity. Experiments of Thomson and of Davisson and Germer. Heisenberg's uncertainty principle, Examples of position-momentum uncertainty—the gamma ray microscope (thought experiment). Numerical problems. [7 hours]

Schrödinger's equation: Eigenvalues, eigenfunctions; Eigenvalue equation, Dynamical variables as operators, Hermitian operators. Postulates of quantum mechanics. Setting up the time-independent Schrödinger equation and time dependent Schrödinger equation. The notion of probability and Born's interpretation of the wave function. Solution of the time-independent Schrödinger equation for particle in one-dimensional infinite potential—calculation of its energy eigenvalues. Harmonic oscillator—mention of energy eigenvalues and eigen zero-point energy. Numerical problems. [9 hours]

References

- Halliday D, Resnick R, and Walker J, *Principles of Physics*, 10th Edn., Wiley India Pvt. Ltd. (2013).
- Duggal B D, and Chabra C L, *Fundamentals of Modern Physics*, 8th Edn., S Nagin Chand and Co. (1997).

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- Kaplan I, *Nuclear Physics*, 2nd Edn., Narosa Publishing House (2002).

PHY502 (DSE) Practical 5

Course duration: 16 weeks with 3 hours of lab work per week.

Any TEN of the following experiments:

1. Characteristics of GM tube.
2. Absorption coefficient of gamma rays.
3. Verification of inverse square law for gamma rays.
4. Solar cell: IV characteristics, efficiency and fill factor.
5. Dielectric constant of a solid.
6. Dielectric constant of a liquid.
7. Determination of wavelength of laser light.
8. e/m of an electron by Thomson's method.
9. Cockcroft-Walton voltage multiplier.
10. Transistor characteristics (CE mode).
11. Determination of Planck's constant using photocell.
12. Determination of charge by Millikan's oil drop method.

PHY503 (DSE) Practical 6

Course duration: 16 weeks with 3 hours of lab work per week.

Any TEN of the following experiments:

1. Zener diode characteristics.
2. Study of Divergence of a diode laser.

3. Determination of mass of an electron.
4. Determination of ionisation potential of Xenon.
5. Verification Thevenin's theorem.
6. Half life of ^{40}K.
7. Detrmination of range of electrons in aluminium using GM Counter.
8. Study of X-ray photograph—determination of interplanar distance.
9. Phase measurement in LCR circuit using CRO.
10. To determine value of Boltzmann constant using VI characteristic of a diode.
11. Triode characteristics.
12. VI characteristics of a thermistor.

PHY511 (SEC) Lasers and Fibre Optics

Course duration: 16 weeks with 2 hours of instruction per week.

Part A: 16 hours

Laser basics: Coherence properties of laser light, temporal coherence, monochromaticity, spatial coherence, directionality, line width, brightness, divergence, line shape broadening, focusing properties of laser radiation, laser modes—axial and transverse, mode selection, single mode operation, selection of laser emission line. [5 hours]

Laser oscillator: Pumping schemes, Gain–threshold conditions; Optical resonators. [3 hours]

Types of lasers: Construction and principles of working of Nd-YAG, CO2 and dye lasers and semiconductor laser. [4 hours]

Laser diodes: Lasing conditions and gain in a semiconductor, selective amplification and coherence, Materials for laser diodes, quantum well lasers, surface emitting lasers, characterization and modulation of lasers. [4 hours]

Part B: 16 hours

Fibre optics and dielectric wave guides: Wave Guide—Slab wave guide,

Modes, V number, Modal material and waveguide dispersions, Numerical problems. [3 hours]

Optical fibre: Types, functions, light propagation, optical power, velocity of propagation, critical angle, acceptance angle, numerical aperture, mode of propagation. Numerical problems. [4 hours]

Index profile: Single mode step-index optical fibre, multimode step-index fibre, graded index fibre; advantages and disadvantages. Numerical problems. [3 hours]

Energy losses in optical fibre: Bit rate, dispersion optical fibre communication, and optical bandwidth, Absorption and scattering, optocoupler. [6 hours]

References

- Wilson J, and Hawkes J, *Optoelectronics: An Introduction*, 3rd Edn., Prentice Hall (1998).
- Singh J, *Optoelectronics: An Introduction to Materials and Devices*, McGraw-Hill (1996).
- Bhattacharya P, *Semiconductor Optoelectronic Devices*, Prentice Hall International (1997).
- Nambiar K R, *Lasers: Principles, Types and Applications*, New Age International Publisher (2004).
- Tomasi W, *Electronic Communication Systems*, 5th Edn., Pearson Education (2008).
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PHY512 (SEC) Astronomy and Astrophysics

Course duration: 16 weeks with 2 hours of instruction per week.

Part A: 16 hours

Astronomical scales: Astronomical distance, 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 the Julian date and its importance in astronomical observation. Basic parameters of stars—determination of distance by parallax method; brightness, radiant flux and luminosity, apparent and absolute magnitude scale, distance modulus. Numerical problems. [16 hours]

Part B: 16 hours

Stars: Surface or effective temperature, and color of a star. Intrinsic temperature of a star. Expression for average temperature, core temperature and core pressure of a star based on the linear density model of a star. Numerical problems. [3 hours]

Stellar characteristics: Spectral classification, Edward Charles Pickering classification (i.e., OBAFGKM), Harvard sequence and Yerke's luminosity classification. Size (radius) of a star. Expression for radius using Stefan-Boltzman law. Spectral signature of elements present in the stellar atmosphere. Mass-luminosity relationship and expression for lifetime of a star. Color index HD classification and HR diagram. Main sequence stars and their general characteristics. The stellar evolution. The evolutionary track of stars—Protostars, premain sequence stars, main sequence stars. Evolution of a star to white dwarf stage through red giant stage. Supernova explosion. Formation of a pulsar or neutron star and black hole (qualitative). Numerical problems. [10 hours]

Cosmology: Basic assumptions and limitations of cosmology; Expansion of the Universe and its evidence; Hubble's Law: Big bang theory and thermal history of the universe. Size and age of the universe. [3 hours]

References

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- Krishnasamy K S, *Astrophysics: A Modern Perspective*, Reprint, New Age International (2006).
- Basu B, *An Introduction to Astrophysics*, Second Printing, Prentice Hall of India (2001).
- Bhatia V B, *Textbook of Astronomy and Astrophysics with Elements of Cosmology*, Alpha Science International (2001).

PHY513 (SEC) Nano Materials

Course duration: 16 weeks with 2 hours of instruction per week.

Part A: 16 hours

Nanoscale systems: 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—Quantum confinement of carriers in 3D, 2D, 1D nanostructures and its consequences. [8 hours]

Synthesis of nanostructure materials: 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. [8 hours]

Part B: 16 hours

Characterization: X-Ray Diffraction. Optical Microscopy. Scanning Electron Microscopy. Transmission Electron Microscopy. Atomic Force Microscopy. Scanning Tunneling Microscopy. [8 hours]

Optical properties: 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, Radiative processes: General formalization—absorption, emission and luminescence. Optical properties of heterostructures and nanostructures. [8 hours]

References

- Poole Jr P C, Owens F J, *Introduction to Nanotechnology*, Wiley India (2003).
- Kulkarni S K, *Nanotechnology: Principles and Practices*, Capital Publishing Company (2015).
- Chattopadhyay K K, and Banerjee A N, *Introduction to Nanoscience and Technology*, PHI Learning (2009).
- Booker R, and Boysen E, *Nanotechnology*, John Wiley and Sons (2005).

PHY601 (DSE) Solid State Physics

Course duration: 16 weeks with 3 hours of instruction per week.

Part A: 16 hours

Semiconductors: Concept of bands in solids. Intrinsic and extrinsic semiconductors. Depletion region, drift velocity, expression for electron and hole concentration in intrinsic semiconductor under thermal equilibrium. Derivation of the expression for electrical conductivity of intrinsic semiconductors; electron and hole mobilities; Expression for the energy gap; Hall effect in semiconductors. Numerical problems. [6 hours]

Semiconductor devices: Diode current equation, IV characteristics, Bridge rectifier, Expression for ripple factor and efficiency. Filters—Zener breakdown and avalanche breakdown. Phenomenon of photoconductivity, photovoltaic cells, LED, FET. Numerical problems. [4 hours]

Transistors: Type and configuration, h parameters; Methods of transistor biasing—voltage divider bias; Fixing operating point, drawing load line. Effect of temperature on the operating point. [2 hours]

Amplifier: Two stage transistor RC coupled amplifier, mathematical analysis, frequency response curve, half power frequency bandwidth. [2 hours]

Oscillators: The feedback concept—positive and negative feedback. Mention of the Barkhausen criterion. Hartley oscillator. [2 hours]

Part B: 16 hours

Statistical physics: Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac energy distribution formulae (no derivation). A qualitative comparison of the three distribution formulae. [2 hours]

Dielectric properties: Dielectric materials; their properties. Method of determining dielectric constant for solids and liquids. [2 hours]

Thermal properties of solids: Dulong and Petit's law; its limitations. Einstein's theory of specific heat. Debye's theory of specific heat. Numerical Problems. [3 hours]

Electrical properties of metals: Band theory of solids—review, Free electron theory of metals—classical theory and quantum theory. Expression for electrical conductivity—Ohm's law, Wiedemann-Franz law. Statement of number of the available energy states between E and $E+\mathrm{d}E$. Expression for the Fermi energy. Hall effect and magnetoresistance in metals. Expression for Hall coefficient in metals. Numerical problems. [6 hours]

Logic gates: Construction of AND, OR, and NOT logic gates using Diodes and transistors (two input). Symbols and discussion of truth table using Boolean expressions for NOR, NAND, and XOR logic gates. Half adder and full adder. [3 hours]

Part C: 16 hours

Superconductivity: Elementary ideas and experimental facts. Meissner effect. Magnetic properties of type-I and type-II superconductors, Critical magnetic field. Influence of external agents on superconductivity, Cooper pairs, BCS theory (qualitative). Applications of superconductivity. Introduction to high temperature superconductors. [4 hours]

Liquid crystals: Symmetry, structure, and classification of liquid crystals; polymorphism in thermotropics. [2 hours]

X-rays: Brag's law and the Bragg spectrometer. A brief mention of the different types of crystals. Miller indices, structure of NaCl and KCl crystals. Continuous

X-ray spectrum and its origin, Duane and Hunt limit. Characteristic X-ray spectra and its origin. Mosley law and its significance. Compton effect—Expression for Compton shift, Compton wavelength, Verification of change in wavelength; Reason for non-observance of Compton effect in visible light. Numerical problems. [10 hours]

References

- Sedha R S, *A Textbook of Applied Electronics*, 2nd Edn., S Chand Limited (2007).
- Theraja B L, and Sedha R S, *Principles of Electronic Devices and Circuits*, 2nd Edn., S.Chand Limited (2008).
- Mehta V K, *Principles of Electronics*, 2nd Edn., S Chand and Company (2005).
- Leach D P, Malvino A P, and Saha G, *Digital Principles and Applications*, 8th Edn., McGraw Hill (1993).
- Beiser A, Mahajan S, Rai Choudhary S, *Concepts of Modern Physics*, 6th Edn., McGraw Hill (2009).
- Eisberg R M, *Quantum Physics of Atoms, Molecules, Solids, Nuclei, and Particles*, 2nd Edn., Wiley India (2006).
- Blackmore J B, *Solid State Physics*, 2nd Edn., Cambridge University Press (1998).
- Dekker A J, *Solid State Physics*, Macmillan (1971).
- Kittel C, *Introduction to Solid State Physics*, 7th Edn., Wiley (2008).

PHY602 (DSE) Practical 7

Course duration: 16 weeks with 3 hours of lab work per week.

Any TEN of the following experiments:

1. Basic logic gates using transistors.
2. Harteley oscillator.
3. Transistor characteristics (CB mode).
4. Characteristics of LED.
5. CE Amplifier—gain and bandwidth.
6. Verification of maximum power transfer theorem.
7. Phase shift oscillator.
8. Zener diode as voltage regulator.
9. Energy gap of a semiconductor using meter bridge.
10. Determination of enery gap of a semiconductor using four probes.

11. Negative feedback amplifier.
12. Calculation h parameters by drawing static characteristics of a transistor in CE mode.

PHY603 (DSE) Practical 8

Course duration: 16 weeks with 3 hours of lab work per week.

Any TEN of the following experiments:

1. Bridge rectifier with C and Pi filter.
2. Fermi energy of copper using meter bridge.
3. Logic gates—AND, OR, NOT, NOR, and X-OR using IC 7400 and 7402.
4. Half adder.
5. Full adder.
6. Phototransistor characteristics.
7. Two stage RC coupled amplifier—gain and bandwidth.
8. Verification of inverse square law of light Using photodiode.
9. Wein bridge oscillator.
10. FET characteristics.
11. Measurement of susceptibility of a paramagnetic solution.
12. DC load line—Determination of Q point of a transistor using voltage divider bias.

PHY611 (SEC) Optoelectronics

Course duration: 16 weeks with 2 hours of instruction per week.

Part A: 16 hours

Optical process in a semiconductor: Electron-hole pair formation and recombination, absorption in semiconductor direct and indirect band gap semiconductors, effect of electric field on absorption, Franz-Keldysh effect in semiconductors. [4 hours]

Optoelectronic devices: Light Emitting Diodes—Materials for light emitting diodes, Principle of action of LED, expression for light power in terms of photon energy, homostructured LED and Heterojunction LED, drawbacks

of homostructured LED. Types of LED structures—planar, dome type, surface emitter, edge emitter, super luminescent structure. Performance characteristics of LED—Optical output power-current characteristics, forward current voltage characteristics, Modulation bandwidth, power bandwidth product, Lifetime, Rise time/fall time, reliability, Internal quantum efficiency, advantages / disadvantages of using LED. Numerical problems. [10 hours]

Organic optoelectronic devices: Organic light emitting diodes (OLED), The principle of OLED, characterisation, structure, efficiency, multilayer OLED. [2 hours]

Part B: 16 hours

Photo detectors: Important parameters of photodetectors, Detector responsivity, spectral response range, response time, quantum efficiency, capacitance, noise characteristics. Absorption of radiation—absorption coefficient, mention of expression for photocurrent, long wavelength cut off, direct and indirect absorption. Types of photodiodes—Junction photodiodes, pin diode, avalanche photodiodes, CCD photodetectors; Comparison of different detectors, Photomultiplier tubes. Phototransistors—characteristics. Photo conductive detectors—expression for photoconductive gain (as in the book of Kasap S. O.). Numerical problems. [10 hours]

Photovoltaic devices: Solar cell—IV characteristics, efficiency, materials. Organic photovoltaic diodes (OPVD)—fundamental process, exciton absorption, exciton dissociation, charge transport, charge collection, characterisation. Numerical problems. [6 hours]

References

- Keiser G, *Optical Fibre Communications*, 3rd Edn., McGraw Hill (2000).
- Agarwal D C, *Fibre Optic Communication*, 2nd Edn., Wheeler Publications (1996).
- Katiyar S, *Optical Communication*, 1st Edn., S K Kataria and Sons (2010).
- Kasap S O, *Optoelectronics and Photonics: Principles and Practices*, 2nd Edn., Pearson (2013).
- Wilson J and Hawkes J F B, *Optoelectronics An Introduction*, 3rd Edn., Prentice Hall (1998).

PHY612 (SEC) Renewable Energy Sources

Course duration: 16 weeks with 2 hours of instruction per week.

Part A: 16 hours

Solar energy: Basic ideas—Origin, Spectral distribution of solar radiation, Attenuation of beam radiation, Basic earth solar angle and derived solar angle, GMT, LCT, LST, Day length, Estimation of average solar radiation, sunshine recorder. Numerical problems. [6 hours]

Solar collectors: Principle of conversion of solar energy into heat, classification of solar collectors, Flat plate and concentrating collectors, construction, Thermal efficiency and coating, Heat losses, Solar cell and its efficiency, PV Panels. Numerical problems. [6 hours]

Photothermal devices: Solar cooker, Solar dryer, solar hot water systems—principles and working. [2 hours]

Photovoltaic systems: Solar lantern, water pumps and street lights—principles and working. [2 hours]

Part B: 16 hours

Wind energy: Origin, estimation of energy obtainable from wind, velocity and power duration curves, energy, pattern factors. Theory of power—Momentum transfer, power coefficients, principle of wind turbine, power vs velocity characteristics of wind turbine generator, cutin speed and cutout speed. Numerical problems. [8 hours]

Wind driven machines: Characteristics of wind turbine; Types—Horizontal and vertical axis types, vertical axis darrieus rotor wind turbine, Horizantal axis propeller type—twin blade and three blade. Blade pitch control. Advantages and disadvantages of two blade and three blade systems. Numerical problems. [8 hours]

References

- Rai G D, *Non-Conventional Energy Sources*, 4th Edn., Khanna Publishers (2009).
- Aarwal M P, *Solar Energy*, S Chand and Co. (1985).
- Sukhatme S P, Nayak J K, *Solar Energy*, 3rd Edn., Tata McGraw-Hill (2008).
- Boyle G, *Renewable Energy, Power for a Sustainable Future*, 2nd Edn., Oxford University Press (2004).
- Jayakumar P, *Resource Assessment Handbook*, APCTT (2009).
- Balfour J, Shaw M, and Jarosek S, *Introduction to Photovoltaics*, Jones and Bartlett Learning (2013).

PHY613 (SEC) Solving Problems in Physics

Course duration: 16 weeks with 2 hours of instruction per week.

Part A: 16 hours

Topics 1:

Frames of reference, Rigid body dynamics Conservation of Linear and angular momentum, Conservation of energy, Surface Tension, Elasticity, Kinetic theory, Thermal conductivity, Radiation, Joule-Thomson expansion, Clausius-Clapeyron first latent heat equation, Entropy, Thermodynamic potentials.

Sound waves motion in one dimension, Superposition of simple harmonic motion, Mechanical force and electric pressure on a charged surface, Galvanometers—moving coil Helmholtz, Thermoelectricity, DC currents, Alternating current fundamentals AC bridges, Network theorems, Frequency filters.

Part B: 16 hours

Topics 2:

Interference—division of wave front and division of amplitude, Diffraction—Fresnel and Fraunhofer diffraction, Polarization, Laser fundamentals.

Atomic Spectra—Bohr and vector atom model, Zeeman effect, Molecular Spectra and Raman Effect, Special theory of relativity, Matter waves, Schrödinger's equation—particle in a box, Mass spectrographs, Radioactive decay, Nuclear reactions, Particle accelerators, Nuclear fission, Electrical properties of metals,

Semiconductors and devices, X-rays—Bragg's law and crystal structure, Moseley law, Compton effect.

References

- Halliday D, Resnick R, and Walker J, *Fundamentals of Physics*, 6th Edn., Wiley India Pvt. Ltd. (2001).
- Kamal A A, *Solutions to Halliday and Resnick Physics Part 2*, Wiley Eastern Pvt Limited (1994).
- Kamal A A, *Solutions to Resnick and Halliday Physics*, Wiley Eastern Limited, (1986)
- Christman R J, and Derringh E, *Fundamentals of Physics Students' Solution Manual*, 6th Edn., Wiley (2008).
- Jain K C, and Arora C L, *Numerical Problems in Physics*, S Chand and Company (2013)
- Serway R A, *College Physics Vol. 2*, 9th Edn., Charles Hartford (2012).
- Brij Lal, and Subramanyam N, *Atomic an Nuclear Physics*, Revised by Jivan Sheshan, S Chand Publications (2008).
- Young H D, Freedman R A, Sears F, and Zeemansky M, *University Physics Vols. 1 and 12*, 13th Edn., Pearson (2011).

Scheme of Valuation for Practicals

C1 and C2 are internal tests to be conducted during 8th and 16th weeks respectively of the semester. C3 is the semester-end examination conducted for 3 hours. The student will be evaluated on the basis of skill, comprehension and recording the results.

The student has to compulsorily submit the practical record for evaluation during C1 and C2. For C3, the record has to be certified by the Head of the Department.

- The student is evaluated for 10 marks in C1 and C2 as per the following scheme: Experiment: 8, Record: 2.

  The marks scored is then normalised for 5.

- The student is evaluated for 40 marks in C3 as per the following scheme:

Heading	Marks
Experiment	25
Viva	10
Record	5
Total	40

  The experiment portion of evaluation is carried out as per the following scheme:

Heading	Marks
Formula with proper units and explanation	5
Setting up the apparatus / circuit connections	5
Taking readings and tabulating	5
Calculations	5
Graph and accuracy of result	5
Total	25

Question Paper Pattern

DSC Courses: 101, 201, 301, 401, and similar courses

Max Marks: 80 Time: 3 hours

Part A

Long answer questions; Answer 2 out of 3 $2 \times 12 = 24$

Part B

Long answer questions; Answer 2 out of 3 $2 \times 12 = 24$

Part C

Numerical problems; 2 from each part; Answer 3 out of 4 $3 \times 4 = 12$

Part D

Short answer questions; 6 from each part to be given;
10 to be answered $10 \times 2 = 20$

DSE Courses: 501, 601, and similar courses

Max Marks: 80 Time: 3 hours

Part A

Long answer questions; Answer 2 out of 3 $2 \times 8 = 16$

Part B

Long answer questions; Answer 2 out of 3 $2 \times 8 = 16$

Part C

Long answer questions; Answer 2 out of 3 $2 \times 8 = 16$

Part D

Numerical problems; minimum 1 from each part;
Answer 3 out of 5 $3 \times 4 = 12$

Part E

Short answer questions; 6 from each part to be given;
10 to be answered $10 \times 2 = 20$

SEC Courses: 511–513, 611–613, and similar courses

Max Marks: 40 Time: 2 hours

Part A

Long answer questions; Answer 2 out of 3 $2 \times 8 = 16$

Part B

Long answer questions; Answer 2 out of 3 $2 \times 8 = 16$

Part C

Short answer questions; 4 questions from each part; Answer 3 $4 \times 2 = 8$

Telephone No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC6/32/2018-19

Dated: 15th June 2018

NOTIFICATION

Sub: Revision of Political Science (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

Ref: 1.Decision of the Board of Studies in Political Science (UG) held on 03-03-2018 and 08-03-2018.
2. Decision of the Faculty of Arts Meeting held on 20-04- 2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.

*****

The Board of Studies in Political Science (UG) which met on 3rd March 2018 and 08th March 2018 has recommended to revise the Political Science (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

The Faculty of Arts and the Deans Committee held on 20-04-2018 and 22.05.2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The contents may be downloaded from the University Website i.e., www.uni-mysore.ac.in

Deputy Registrar(Academic)

Draft Approved by the Registrar

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Arts, Department of Studies in English,Manasagangotri, Mysuru.
3. The Chairman, Department of Studies in Political Science, Manasagangothri, Mysuru.
4. The Chairman, Board of Studies in Political Science, (UG) Manasagangotri, Mysuru.
5. All the Principals of Affiliated/Constituent College running, Political Science, Graduate Programme.
6. The Director, College Development Council, MoulyaBhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB and EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysuru.
9. Office Copy.

University of Mysore.
Department of studies in Political Science
Manasagangotri, Mysore -India

Muzaffar H Assadi
Professor,
Chairman, Board of studies
Email: muzaffar.assadi@gmail.com, muzaffar.assadi@hotmail.com
Phone: 91-821-2419501(off), 0821-2543936®, 94481-86295(mobile)

UG BOS in Political Science
Proceedings on CBCS Syllabus & Examination pattern

The UG BOS in Political Science, which met on 3rd and 8th of March 2018, under the Chairmanship of Dr. Muzaffar H Assadi, Professor of Political Science, University of Mysore, Mysuru has made the following resolutions with regard to CBCS syllabus and the pattern of Examination.

1. Resolved to introduce a whole 100 marks paper for each semester. Out which 80 marks are for a written examination, to be conducted by the University at the end of each semester and the remaining 20 marks are for Internal Assessment.

2. Resolved to award the 20 Marks, reserved for Internal Assessment, based on the performance in Test/ Assignment/ Seminar/ Viva Voce / Field Visit. This is to be done by means of C1 and C2, each for 10 Marks, as follows,

Assessment for Maximum 100 marks in each Semester.

Sl.No.	Method of assessment	Marks
01	C1 (Internal Assessment)	10
02	C2 (Internal Assessment)	10
03	C3 (Theory Examination)	80
04	Total Marks	100

3. Resolved to introduce a Question Paper for 80 Marks Theory Examination, consisting of Part-A and Part-B. Part-A is to have Eight Questions, each carrying Ten marks and only Five Questions have to be answered. Part-B is to have Four Questions of Fifteen Marks each and only Two Questions have to be answered. The duration of Examination is three hours. The following is the Model of QP.

CBCS Question Paper pattern
Political Science

Time: 3hours Max. Marks: 80

PART-A

Note: Answer any five questions. Each question carries ten marks.

5X10=50

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------
6. ----------
7. ----------
8. ----------

PART-B

Note: Answer any two questions. Each question carries fifteen marks

2X15=30

9. ----------
10. ----------
11. ----------
12. ----------

4. As per the instructions given, for subjects with less than three credits, there must be a whole 50 marks paper. Out which 40 marks are for a written examination, to be conducted by the University at the end of each semester and the remaining 10 marks are for Internal Assessment. C1for 10 marks IA and C2 for 40 marks Examination to be made. The following are the papers with less than three credits,

GE-1-Indian Administration at Vth Sem,

GE-2-Human Rights Gender and Environment at VIth Sem,

The QP consists of six questions, out of which four have to be answered. The duration of Examination is two hours. The following is the Model of QP for such Papers is as follows,

CBCS Question Paper pattern
Political Science

Time: 2 hours Max. Marks: 40

Note: Answer any four questions. Each question carries ten marks.

4X10=40

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------
6. ----------

5. Resolved to introduce the following papers in Political Science at the UG level as per the CBCS course credit structure given by the University. This is shown in the below table,

Sem.	Title of the Paper	Weekly Hours L+T+P	Credits	Max. Marks
I DSC-1A	Introduction to Political Science	5+1+0=6	6	80+20=100
II DSC-1B	Indian Government and Politics	5+1+0=6	6	80+20=100
III DSC-1C	Major political Ideologies	5+1+0=6	6	80+20=100
IV DSC-1D	Introduction to International Relations	5+1+0=6	6	80+20=100
V DSE	1. Themes in Comparative Political Theory 2.Public Administration and Public Policy. 3.State politics in India with special reference to Karnataka 4. Political Sociology	5+1+0=6 5+1+0=6 5+1+0=6 5+1+0=6	6 6 6 6	80+20=100 80+20=100 80+20=100 80+20=100
VI DSE	1. Democracy and Governance. 2. Understanding Globalization. 3. Local Governments in India. 4.Foreign Policy of India	5+1+0=6 5+1+0=6 5+1+0=6 5+1+0=6	6 6 6 6	80+20=100 80+20=100 80+20=100 80+20=100
V GE-1	Indian Administration	3	2	40+10=50
VI GE-2	Human Rights Gender and Environment	3	2	40+10=50
I or II SEM (AECC)	Constitution of India	2+2+0=4	3	80+20=100

6. Resolved to give a detailed copy of the syllabus containing the contents and list of suggested readings along with this. In the 1st, 2nd, 3rd and 4th semester Discipline Specific course (DSC) paper are taught. In both 5th and 6th semester, one Discipline Specific Elective (DSE) paper is taught. But students must be strictly allowed to choose their Elective papers.

Discipline Specific course papers (DSC)

I – Sem - Introduction to Political Science

II – Sem - Indian Government and Politics

III- Sem - Major political Ideologies

IV- Sem - Introduction to International Relations

Discipline Specific Elective papers (DSE)

V- Sem - 1. Themes in Comparative Political Theory
2. Public Administration and Public Policy.
3. State politics in India with Special reference to Karnataka
4. Political Sociology

VI- Sem - 1. Democracy and Governance.
2. Understanding Globalization.
3. Local Governments in India.
4. Foreign Policy of India

Generic Electives papers (GE)

V- Sem – Indian Administration

VI- Sem – Human Rights Gender and Environment

Ability Enhancement Compulsory Paper (AECC)

I &II- Sem- Constitution of India

Discipline Specific course papers (DSC)

Semester-I

Introduction to Political Science

1. Introduction to Political Science:
   a. Meaning, Nature, Scope and Importance
   b. Approaches-Historical, Comparative, Experimental and Behavioral.
   c. Concept of politics: Meaning, Nature and Major concerns

2. Concept of State
   a. Meaning & Elements of State
   b. Major Notions– Organic theory and Class theory
   c. Origin of State- Social contract, Evolutionary, & Marxist Theories.

3. Concept of Rights and Freedom
   a. Meaning, Kinds – Moral and Legal Rights , Negative and Positive Rights
   b. Theory of Natural Rights, Historical Theory and Marxist Theory
   c. Concept of Freedom

4. Concepts of Liberty, Equality and Justice
   a. Liberty-Meaning, Kinds, Importance & Safeguards: Negative V/S Positive Liberty.
   b. Equality - Meaning, Kinds, Importance and Obstacles to Equality
   c. Concept of Justice - Meaning, Kinds, Importance.

5. Debates in Political Theory:
   a. Is democracy compatible with economic growth?
   b. On what grounds is censorship justified and what are its limits?
   c. Does protective discrimination violate principles of fairness?
   d. Should the State intervene in the institution of the family?

Books:

1. S.P. Verma - Modern Political Theory
2. J.C Johari - Contemporary Political Theory
3. A.C. Kapur - Principles of Political Theory

4. Appadorai - Substance of Politics 1986
5. Asirwathm - Political Theory 1990.
6. Robert Dahl - Modern Political Analysis 1990
7. Ebenstein - Today's Isms
8. Adi Doctor - Issues in Political Theory
9. V.D Mahajan – Political Theory
10. R C Agarwal – Political Theory
11. Sushila Ramaswamy – Political Theory: Ideas and Concepts
12. B K Gokhale – Political Theory
13. ಎಮ್. ಕೃಷ್ಣರಾವ್ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ
14. ಪ್ರೊ. ಮಾಲಿಮುದ್ದಣ್ಣ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ಸಿದ್ಧಾಂತಗಳು
15. ಪ್ರೊ. ಎನ್. ಹಾಲಪ್ಪ – ರಾಜ್ಯಶಾಸ್ತ್ರ
16. ಕೆ.ಜಿ. ಸುರೇಶ್ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ಚಿಂತಕರು
17. ಪ್ರೊ. ಹೆಚ್.ಟಿ. ರಾಮಕೃಷ್ಣ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ
18. ಪ್ರೊ. ಟಿ. ಮಲ್ಲಪ್ಪ – ಆಧುನಿಕ ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ದಾರ್ಶನಿಕರು

Bhargava, R. (2008) 'What is Political Theory', in Bhargava, R. and Acharya, A. (eds.) *Political Theory: An Introduction.* New Delhi: Pearson Longman,

Sriranjani, V. (2008) 'Liberty', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction.New Delhi: Pearson Longman, pp. 40-57.

Menon, K. (2008) Justice', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction. New Delhi: Pearson Longman, pp. 74-82.

Talukdar, P.S. (2008) 'Rights', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction.New Delhi: Pearson Longman, pp. 88-105.

Srinivasan, J. (2008) 'Democracy', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction.New Delhi: Pearson Longman, pp. 106-128.

Roy, A. 'Citizenship', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction. New Delhi: Pearson Longman, pp. 130-147.

Das, S. (2008) 'State', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction. New Delhi:Pearson Longman, pp. 170-187.

Singh, M. (2008) 'Civil Society', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction.New Delhi: Pearson Longman, pp. 188-205.

Menon, N. (2008) 'Gender', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction. New Delhi: Pearson Longman, pp. 224-235.
Shorten, A. (2008) 'Nation and State', in McKinnon, C. (ed.) Issues in Political Theory, New York: OxfordUniversity Press, pp. 33-55.

Christiano, Thomas. (2008) 'Democracy', in McKinnon, Catriona. (ed.) Issues in Political Theory, New York: Oxford University Press, pp. 80-96.

Riley, J. (2008) 'Liberty', in McKinnon, C. (ed.) Issues in Political Theory, New York: Oxford University Press, pp. 103-125.

Casal, P. & William, A. (2008) 'Equality', in McKinnon, C. (ed.) Issues in Political Theory. New York: Oxford University Press, pp. 149- 165.

Sethi, A. (2008) 'Freedom of Speech and the Question of Censorship', in Bhargava, R. andAcharya, A. (eds.) Political Theory: An Introduction. New Delhi: Pearson Longman, pp. 308-319.

Acharya, A. (2008) 'Affirmative Action', in Bhargava, R. and Acharya, A. (eds.) Political Theory: An Introduction. New Delhi: Pearson Longman, pp. 298-307.

Frances E O. (1985) 'The Myth of State Intervention in the Family', University of Michigan Journal of Law Reform. 18 (4), pp. 835-64.

Jha, M. (2001) 'Ramabai: Gender and Caste', in Singh, M.P. and Roy, H. (eds.) Indian Political Thought: Themes and Thinkers, New Delhi: Pearson.

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Semester-II

Indian Government and Politics

I. Introduction:
Historical development of the Constitution,
Approaches to Indian Politics,
Nature of State in India: Liberal,Marxist and Gandhian,
Features of the Constitution

II. Preamble to the Constitution,
Fundamental Rights and Duties.
Directive Principles of State Policy.
Debates on Fundamental Rights and Directive Principles

III. Union Government:
Legislature- Rajya Sabha and Lok Sabha: Composition, Powers and Functions.
Executive- President, Prime Minister,- Powers and Functions
Judiciary- The Supreme Court: Composition, Powers and Functions.

IV. Major Functionaries:
Union Public Service Commission: Composition, powers &Functions.
Election Commission: Composition, powers &Functions.
Planning Commission (NITI): Composition, powers &Functions.
Comptroller and Auditor General: powers &Functions.

V. Religion and Politics: debates on secularism and communalism
SocialMovements: Peasants, Environmental &Women's Movement
Parties and Party systems in India
Power Structure in India: Caste, class and patriarchy

Books and Reference:

1. D. D. Basu. Introduction to the Constitution of India.
2. Norman D. Palmer. The Indian Political System
3. Dr. M. V. Pylee. India's Constitution
4. Dr .B.L.Fadia. Indian Government and Politics.
5. Dr.A.P .Avasthi. Indian Government and Politics
6. J.C. Johari. Indian Government and politics-
7. Vidhya Bhushan and Vishnu Bhagawan,Indian Constitution—

8. Dr. S.N. Dubey, Indian Government and Politics -
9. Faida, India's Constitution
10 Dr. Prakash Chandra, Indian Government and Politics –
11. Grenville Austin, Indian Constitution: A cornerstone of a Nation
12.C.P.Bambri, Indian Politics since Independence.
13. Rajini Kothari, Crisis of Secularism in India
14. Singh M P & Saxena, Indian Politics: Contemorary Issues and Concerns
೧೫. ಡಾ. ಎಚ್. ಎಂ. ರಾಜಶೇಖರ ಭಾರತದ ಸಂವಿಧಾನ ಮತ್ತು ರಾಜಕೀಯ, ಕಿರಣ್ ಪ್ರಕಾಶನ, ಮೈಸೂರು
೧೬. ಪಿ.ಎಸ್. ಗಂಗಾಧರ ಭಾರತದ ಸಂವಿಧಾನ,
೧೭. ಪ್ರೊ. ಎನ್. ಹಾಲಪ್ಪ , ರಾಜ್ಯಶಾಸ್ತ್ರ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು
೧೮. ಹೆಚ್.ಟಿ. ರಾಮಕೃಷ್ಣ - ಭಾರತ ಸಂವಿಧಾನ, ಲಲಿತ ಪ್ರಕಾಶನ
೧೯. ಡಾ.ಎಂ.ಪಿ. ಭುವನೇಶ್ವರ ಪ್ರಸಾದ್ - ಭಾರತದ ಸಂವಿಧಾನ, ಕಲಾ ಪ್ರಕಾಶನ
೨೦. ಶೀಲವಂತರ - ಭಾರತದ ಸಂವಿಧಾನ ಸರ್ಕಾರ ಮತ್ತು ರಾಜಕೀಯ , ವಿದ್ಯಾನಿಧಿ
೨೧. ಕೆ.ಜೆ.ಸುರೇಶ್-ಭಾರತ ಸಂವಿಧಾನ.

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Singh, M.P. & Saxena, R. (2008) *Indian Politics: Contemporary Issues and Concerns.* New Delhi: PHILearning.
Vanaik, A. & Bhargava, R. (eds.) (2010) *Understanding Contemporary India: Critical Perspectives.* New Delhi: Orient Blackswan.

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Semester -III

Major Political Ideologies

1. Introduction to Political Ideology

   a. Meaning, Importance, Role and Impact of Ideology
   b. Broad Classification – Left, Right and Center
   c. End of Ideology , Emergence of New Ideology

2. Nationalism

   a. Meaning, Importance and Forms
   b. Merits and Demerits of Nationalism
   c. Nationalism in the era Globalization

3. Liberalism

   a. Meaning, Origin and Development
   b. Classical and Modern Liberalism
   c. Main Currents in Liberalism - Individualism, Utilitarianism, Libertarianism and Communitarianism

4. Socialism, Democratic Socialism and Marxism

   a. Socialism – Meaning, Features, Values and Limitations
   b. Democratic Socialism – Meaning and Features
   c. Marxism - Elements of Marxism (Dialectical Materialism, Economic Interpretation of History, concept of Capitalism, Doctrine of Class Struggle)

5. Democracy

   a. Meaning, Features, Importance, Kinds and Merits & Demerits
   b. Institutional requirements for Democracy
   c. Liberal and Marxist Theories of Democracy

Books for reference:

1. Andrew Heywood – Political Ideologies: An Introduction
2. Andrew Heywood – Politics
3. Sushila Ramaswamy - Political Theory: Ideas And Concepts
4. A.C. Kapur - Principles Of Political Theory
5. Appadorai - Substance Of Politics 1986
6. Asirwathm - Political Theory 1990.
7. Robert Dahl - Modern Political Analysis 1990
8. Ebenstein - Today's Isms
9. S.P. Verma - Modern Political Theory
10. J.C Johari - Contemporary Political Theory
11. V.D Mahajan – Political Theory
12. R C Agarwal – Political Theory
13. B K Gokhale – Political Theory
14. ಎಮ್. ಕೃಷ್ಣರಾವ್ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ
15. ಪ್ರೊ. ಮಾಲಿಮುದ್ದಣ್ಣ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ಸಿದ್ಧಾಂತಗಳು
16. ಪ್ರೊ. ಎನ್. ಹಾಲಪ್ಪ – ರಾಜ್ಯಶಾಸ್ತ್ರ
17. ಕೆ.ಜಿ. ಸುರೇಶ್ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ಚಿಂತಕರು
18. ಪ್ರೊ. ಹೆಚ್.ಟಿ. ರಾಮಕೃಷ್ಣ – ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ
19. ಪ್ರೊ. ಟಿ. ಮಲ್ಲಪ್ಪ – ಆಧುನಿಕ ರಾಜಕೀಯ ಸಿದ್ಧಾಂತ ಮತ್ತು ದಾರ್ಶನಿಕರು

Semester- IV

Introduction to International Relations

I. Introduction:
Meaning, Nature, Scope and Importance,
Growth of International Relations as a discipline,
Approaches to the study of International Relations- Realism and Idealism.

II. National Power
Meaning, characteristics, dimensions of National Power.
Elements-Tangible and Intangible factors.
Limitations on National Power.

III. Foreign Policy and its Instruments
Foreign Policy: Meaning, Formulation, Execution and Determinants.
Diplomacy: Meaning, Functions, Privileges and Immunities of Diplomats.
War: Meaning, Causes Effects and Remedies of War.
Pacific settlement of International disputes.

IV. United Nations.
Historical Evolution, principles, aims and objectives,
Structure and Functions of the Principal Organs of the UN
The UN achievements, Reforms of the UN

V. India's Foreign Policy
Basic Determinants (Historical, Geo-Political, Economic, Domestic and Strategic)
India's Policy of Non-alignment
India: An Emerging Power

Books &References:

1. Palmer and Parkins, International Relations.
2. H.J. Morgenthau, Politics among Nations.
3. Mahendar Kumar, Theoretical Aspects of International Politics.
4. Prakash Chandra, International politics.
5. S C Singhal, introduction to World politics.
6. JC Johari, International Relations and politics
7. U Sharma, International Relations.
8. Rumki Basu, International Relations.
೯. ಡಾ.ಪಿ.ಎಸ್.ಜಯರಾಮು - ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು , ಕಣ್ವಪ್ರಕಾಶನ

೧೦. ಡಾ.ಎಂ.ಪಿ. ಭುವನೇಶ್ವರ ಪ್ರಸಾದ್- ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳ ಪರಿಕಲ್ಪನೆಗಳು , ಶಬರಿಮಲೆಯನ
೧೧. ಎಚ್.ಸಿ. ಲೋಹಿತಾಶ್ವ - ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು ಮತ್ತು ಸಂಘಟನೆಗಳು , ವಿದ್ಯಾನಿಧಿ ಪ್ರಕಾಶನ
೧೨. ಕೆ.ಜೆ.ಸುರೇಶ - ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು, ಚೇತನ ಬುಕ್ ಹೌಸ್
೧೩. ಮಾಲಿ ಮುದ್ದಣ್ಣ- ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು , ಕಲಾ ಪ್ರಕಾಶನ
೧೪. ಹಾಲಪ್ಪ - ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು , ವಿದ್ಯಾನಿಧಿ ಪ್ರಕಾಶನ
೧೫. ಹೆಚ್ . ಟಿ. ರಾಮಕೃಷ್ಣ– ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು

1) The making of India's Foreign Policy – J Bandopadhyaya
2) India's Search for Power – Surjeetman Singh
3) India's Foreign Policy – edited b by Bimal Prasad
4) India's Foreign Policy – V.P. Dutt
5) Realities of India's Foreign Policy – N.M. Khilnani
6) Studies in India's Foreign Policy – S. Chopra

Discipline Specific Elective papers (DSE)

Semester- V

(Paper-1)

Themes in Comparative Political Theory

I. introduction
- a. Distinctive features of Indian and Western political thought
- b. Aristotle on Citizenship
- c. Locke on Rights, Rousseau on inequality
- d. J. S. Mill on liberty and democracy
- e. Marx and Bakunin on State

II. Indian Thought:
- a. Kautilya on State
- b. Tilak on Swaraj
- c. Lohia on Social Justice
- d. Nehru and Jayaprakash Narayan on Democracy
- e. Pandita Ramabai on Patriarchy

III . Gandhian thought
- a. Religion and Politics, State
- b. Non-Violence, Satyagraha,

IV. Dr. B R Ambedkar
- a. Role in the Making of Indian Constitution
- b. Social Justice, Democracy, Socialism

Books and Reference

1. Urmila Sharma & S.K. Sharma- Western Political Thought
2. V.P. Varma-Modern Indian political Thought
3. J P Suda -Modern political thought
4. N.Jayapalan- Indian Political Thinkers
5. K. S. Padhy- Indian Political Thought
6. Subrata Mukharjee and Sushila Ramaswamy- A History of Political Thought
7. O P Gauba -Western Political Thought

8. V.P. Varma- Ancient and Medieval Indian political Thought

11. Stephen C. Angle, Contemporary Confucian Political Philosophy, Polity press, UK, 2012.

12. Jai Narain Sharma, The Political Thought of Maulana Abul Kalam Azad,Vol.29 , Encyclopedia of Eminent Thinkers, concept pub. New Delhi.

18. Sherwin Haroon Khan, Muslim Political Thought & Administration, Delhi, 1991.

21. Rajakiya Chintakaru- Chandra Mohan and Sharada (Kannada Version)

೨೨. ಎಂ.ಪಿ. ಭುವನೇಶ್ವರ ಪ್ರಸಾದ್ - ಪ್ರಾಚೀನ ಭಾರತದ ರಾಜಕೀಯ ತಾತ್ವಿಕರು,

೨೩. ಎಂ.ಪಿ. ಭುವನೇಶ್ವರ ಪ್ರಸಾದ್ - ಆಧುನೀಕ ರಾಜಕೀಯ ಚಿಂತಕರು,

೨೪. ಮಾಲಿ ಮುದ್ದಣ್ಣ - ರಾಜನೀತಿಜ್ಞರು,

೨೫. ವಿ.ಜಿ.ಸಾಲಿಮಠ - ರಾಜ್ಯಶಾಸ್ತ್ರ ವೈಚಾರಿಕರು,

೨೬. ಎಚ್.ಸಿ.ಲೋಹಿತಾಶ್ವ – ರಾಜಕೀಯ ಚಿಂತಕರು,

೨೭. ನವಲಗುಂದ - ಪಾಶ್ಚಿಮಾತ್ಯ ಮತ್ತು ಭಾರತೀಯ ರಾಜನೀತಿ ವಿವೇಚಕರು,

೨೮. ಕಲ್ಮಠ ಮತ್ತು ಶೀಲವಂತರ - ಭಾರತೀಯ ರಾಜನೀತಿ ವಿವೇಚಕರು,

೨೯. ಕೆ.ಜೆ.ಸುರೇಶ್ - ಪಾಶ್ಚಿಮಾತ್ಯ ರಾಜಕೀಯ ಚಿಂತಕರು,

30.ಡಾ. ಜಿ.ಎಸ್. ಸದಾನಂದ – ಕೌಟಿಲ್ಯ

31.ಲಕ್ಕಪ್ಪಗೌಡ – ದಲಿತ ಸೂ0ರ್ಯ

32.ಕೆ.ಚಂದ್ರಶೇಖರ್ – ಆಧುನಿಕ ಭಾರತದ ರಾಜಕೀ0ಯ ಚಿಂತಕರು

Dallmayr, F. (2009) 'Comparative Political Theory: What is it good for?', in Shogimen, T. and Nederman, C. J. (eds.) *Western Political Thought in Dialogue with Asia.* Plymouth, United Kingdom: Lexington,pp. 13-24.

Parel, A. J. (2009) 'From Political Thought in India to Indian Political Thought', in Shogiman, T. and Nederman, C. J. (eds.) *Western Political Thought in Dialogue with Asia.* Plymouth, United Kingdom:Lexington, pp. 187-208.

Pantham, Th. (1986) 'Introduction: For the Study of Modern Indian Political Thought', in Pantham, Th. & Deutch, K. L. (eds.) *Political Thought in Modern India.* New Delhi: Sage, pp. 9-16.

Burns, T. (2003) 'Aristotle', in Boucher, D and Kelly, P. (eds.) *Political Thinkers: From Socrates to the Present.* New York: Oxford University Press, pp. 73-91.

Waldron, J. (2003) 'Locke', in Boucher, D. and Kelly, P. (eds.) *Political Thinkers: From Socrates to the Present*, New York: Oxford University Press, pp. 181-197.

Boucher, D. (2003) 'Rousseau', in Boucher, D. and Kelly, P. (eds.) *Political Thinkers: From Socrates to the Present.* New York: Oxford University Press, pp. 235-252.

Kelly, P. (2003) 'J.S. Mill on Liberty', in Boucher, D. and Kelly, P. (eds.) *Political Thinkers: From Socrates to the Present*. New York: Oxford University Press, pp. 324-359.

Wilde, L. (2003) 'Early Marx', in Boucher, D. and Kelly, P. (eds.) *Political Thinkers: From Socrates to the Present.* New York: Oxford University Press, pp. 404-435.

Sparks, Ch. and Isaacs, S. (2004) *Political Theorists in Context*. London: Routledge, pp. 237-255.

Mehta, V. R. (1992) *Foundations of Indian Political Thought.* New Delhi: Manohar Publishers, pp. 88-109.

Inamdar, N.R. (1986) 'The Political Ideas of Lokmanya Tilak', in Panthan, Th. & Deutsch, K. L. (eds.) *Political Thought in Modern India.* New Delhi: Sage, pp. 110-121.

Patham, Th. (1986) 'Beyond Liberal Democracy: Thinking With Democracy', in Panthan, Th. & Deutsch, K.L. (eds.) *Political Thought in Modern India.* New Delhi: Sage, pp. 325-46.

Zelliot, E. (1986). 'The Social and Political Thought of B.R. Ambedkar', in Panthan, Th. & Deutsch, K. L.(eds.) *Political Thought in Modern India.* New Delhi: Sage, pp. 161-75.

Anand Kumar, 'Understanding Lohia's Political Sociology: Intersectionality of Caste, Class, Gender and Language Issue' *Economic and Political Weekly*. Vol. XLV: 40, October 2008, pp. 64-70.

Pillai, R.C. (1986) 'The Political thought of Jawaharlal Nehru', in Panthan, T. & Deutsch, K. L. (eds.) *Political Thought in Modern India.* New Delhi: Sage pp. 260-74.

Jha, M. (2001) 'Ramabai: Gender and Caste', in Singh, M.P. and Roy, H. (eds.) *Indian Political Thought:Themes and Thinkers*, New Delhi: Pearson.

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Semester- V

(Paper-2)

Public Administration and Public Policy

I. Introduction:

Meaning, Nature, Scope and Importance.

Public and Private Administration, Major Approaches, Comparative Approaches to Public Administration.

II. Administrative theories: Classical Theory, Scientific Management, Human Relation Theory and Rational Decision-Making.

Principles of Organization -Hierarchy, Unity of Command, Span of Control, Chief Executive, Department, Corporation and Commission.

III. Personnel Administration:

Civil Service- Meaning, Features and Functions.

Recruitment, Training, Promotion and Retirement,

Discipline- Formal and Informal disciplinary measures.

IV. public policy: concept and theories,

relevance of policy making,

Process of policy formulation and implementation and evaluation.

References:

1. Public Administration- Avasthi and Maheswari.
2. Principles of Public Administration- A.R. Tyagi.
3. Public Administration- Mohit Bhattacharya.
4. Public Administration- Vishnu Bhagwan and Vidhya Bhushan.
5. Public Administration-C P Bhambri.
6. Theory and Practice of Public Administration- M.P.Sharma.
7. Financial Management of Govenrment, M.J.K. Thavarajan.
8. Public Administration concepts and Theories- Rumki Basu.

೯. ಹೆಚ್ . ಟಿ. ರಾಮಕೃಷ್ಣ - ಸಾರ್ವಜನಿಕ ಆಡಳಿತ, ಲಲಿತ ಪ್ರಕಾಶನ

೧೦. ಡಾ.ಎಂ.ಪಿ. ಭುವನೇಶ್ವರ ಪ್ರಸಾದ್- ಸಾರ್ವಜನಿಕ ಆಡಳಿತದ ಮೂಲತತ್ವಗಳು,

೧೧. ಮಾಲಿಮದ್ದಣ್ಣ - ಸಾರ್ವಜನಿಕ ಆಡಳಿತ,

೧೭ ಎಚ್.ಕೃಷ್ಣರಾವ್ - ಸಾರ್ವಜನಿಕ ಆಡಳಿತ,

೧೩. ನವಲಗುಂದ - ಸಾರ್ವಜನಿಕ ಆಡಳಿತ,

೧೪. ಶೀಲವಂತರ - ಸಾರ್ವಜನಿಕ ಆಡಳಿತ,

೧೫. ಕೆ.ಜೆ.ಸುರೇಶ್ - ಸಾರ್ವಜನಿಕ ಆಡಳಿತ,

16. Sarvajanika Adalitha, M NanjundaSwamy(Kannada version)

17. Dye, T.R. (1975) Understanding Public Policy. New Jersey: Prentice Hall, pp. 1-38, 265-299.
18. Dror, Y. (1983) Public Policy Making Reexamined. Oxford: Transaction Publication, pp 129-216.

Semester –V

(Paper-3)

State Politics in India with Special reference to Karnataka

I. Introduction

Re-Organization of states,

JVP Committee and Fazl Ali Commission Recommendations

Constitutional Position of States in India.

II. Structure of State Government

Legislature: Vidhana Sabha &Vidhana Parishad-composition, powers &functions

Executive: Governor, Chief Minister and Council of Ministers- powers &functions

Judiciary: High Court-Organization, powers &functions

III. State Politics of Karnataka

Historical Legacies, Evolution of Political Administration

Party and Electoral Politics in Karnataka,

Political Leadership -Kengal Hanumanthiah, D. Devaraj Urs, Ramakrishna Hedge.

Changing Pattern of Political Leadership in Karnataka Politics

IV. Issues in Karnataka Politics

Inter-State Relations, Regional Imbalance,

Regionalism and Separatism,

Caste, Class and Religion in Karnataka Politics

Books & Reference:

1. Arora B and D.V. Vernay, Multiple Identites in a Single State: Indian Federalism in a Comparative Perspective, Delhi Conark,1995.
2. Austin.G, Working a Democratic Constitution: The Indian Experience, Delhi, OU Press 2000.
3. Brass Paul, Language, Religion and Politics in North India, London, Cambridge University, 1974
4 .Chaterjee P (ed.) Politics in India: The State-Society Interface, New Delhi, South Asian Pub. 2001.
5 Chadda, Ethnicity, Security and Separatism in India, Delhi, Oxford University Press, 1997.
6. Chaterjee P (ed.) State and Politics in India, Delhi Oxford University Press, 1997.

7. Frankel F and M.S.A. Rao, Dominance and State of Power in Modern India, Decline of Social Order, OU Press, 1990.
8. Rajni Khothri, Caste in Indian Politics, Orient BlackSwan – 2010.
9.Prof. Midatala Rani, Karnataka Government and Politics, Chethana Publishers,Mysore, 1998.
10. Prof. Muzaffar H. Assadi, Politics of Peasant Movement in Karnataka, Shipra, Delhi,1997.
11. Karnataka State Gazetteer, Government PrintingPress, Bangalore, 1982/1983.
12. H.M. Rajashekara, Indian Government and Politics (Kannada Version), Kiran Publishers, Mysore, 2001.
13. Harish Ramaswamy , Karnataka Government and Politics, Concept Publishing Company, New Delhi-2007
14. E. Raghavan and James Manor, Broadening and Deepening Democracy: Political Innovation in Karnataka, Routledge, 2009
15. Phalaksha, Political and Cultural History of Karnataka.
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Semester- V
(Paper-4)

POLITICAL SOCIOLOGY

I. Introduction

Political Sociology: Meaning, Nature, Scope and importance.
Approaches - Systems, Structural-Functional and Marxist
Elite Theorists - Pareto, Mosca, Michels and Mills.

II. Power, Authority and Legitimacy.

Political Culture, Political Socialisation and Political Participation.

III. Social Stratification in India

Caste, Class, Community, Religion
Sanskritization, Westernization, Little and Great Traditions,
Modernization and secularization debate in India.

IV. Politics and Society

Elections, Party System, Pressure Groups and their impact on society and state.
Elites and Socio-Political Change, Changing nature of Indian Elites.
Ethnicity and Politics, Regional and Linguistic politics.
Rural-Urban Divide, Emergence of new Rural and Urban groups in politics.

Books and Reference

1. Wright Mills. C, The Power Elite, Oxford University Press, UK, 2000.
2. Keith Faulks, Political Sociology: A Critical Introduction, Edinburgh University Press, UK ,1999.
3. Betty Dobratz, & LK Waldner An :and Society ,Politics ,Power ,Buzzell Timothy Introduction to Political Sociology, Routledge, US,2015.
4. Kate Nash, Contemporary Political Sociology: Globalization, Politics and Power, John Wiley & Sons, 2009
5. Tom Bottomore, Political sociology, Pluto Press, 1993.

6. Max Weber, Economy and Society: An Outline of Interpretive Sociology, University of California Press, London,1978.
7. Davita Glasberg & Deric Shannon, Political Sociology: Oppression, Resistance, Sage pub., 2010
8. Seymour Martin Lipset, Political Man: The Social Bases of Politics, Johns Hopkins University Press, US, 1981.
9. Anthony M. Orum, Introduction to Political Sociology, Prentice Hall, US, 2001
10. Ali, Ashraf and C.N. Sharma (1983). Political Sociology: A New Grammar of Politics,Madras University Press, Madras, Iidia,
11. Reinhard Bendix, (1968).State and Society, Little Brown, Boston,US.
12.Dahl, Robert (1983).Modern Political Analysis, Prentice Hall, New Delhi:
13.Eisenstadt, S.N. ed. (1971) Political Sociology, Basic Books, New York.
14.Gupta, Dipankar (1996).Political Sociology inIndia: Contemporary Trends, OrienLongman, Hyderabad, India.
15.Hyman, H.H. (1972). Political Socialization: A Study in the Psychology of Political Behaviour, Glencoe: Free Press.
16.Jangam, R.T. (1980). Text Book of Political Sociology, Oxford and IBH Publishing Company, New Delhi.
17. Rajni Kothari (1973) Caste in Indian Politics, New Delhi: Orient Longman.
18.Mitra, Subrata K. and James Chiriyandath eds. (1992).Electoral Politics in India: A Changing Landscape, Segment Books, New Delhi.
19.Mukhopadhyay, A.K. (1977)Political Sociology: An Introduction, Calcutta, India.

Semester-VI
(Paper-1)

Democracy and Governance

1. Structure and Process of Governance:
Meaning and importance of Democracy, Indian Model of Democracy, Parliament, Party Politics and Electoral behaviour, Federalism, The Supreme Court and Judicial Activism, Units of Local Governance Political Communication -Nature, Forms and Importance

II. Ideas, Interests and Institutions in Public Policy:
a. Contextual Orientation of Policy Design
b. Institutions of Policy Making
1. Regulatory Institutions – SEBI, TRAI, Competition Commission of India,
2. Lobbying Institutions: Chambers of Commerce and Industries, Trade Unions, Farmers Associations.

III. Contemporary Political Economy of Development in India:
Policy Debates over Models of Development in India,
Recent trends of Liberalization of Indian Economy in different sectors,
E-governance.

IV. Dynamics of Civil Society:
New Social Movements and Various interests,
Role of NGO's,
Understanding the political significance of Media and Popular Culture.

Essential Readings:

Agarwal B, Environmental Management, Equity and Ecofeminism: Debating India's Experience, Journal of Pesant Studies, Vol. 25, No. 4, pp. 55-95.

Atul Kohli (ed.), The Success of India's Democracy, Cambridge University Press, 2001.

Corbridge, Stuart and John Harris, Reinventing India: Liberalisation, Hindu Nationalism and Popular Democracy OUP, 2000.

J.Dreze and A.Sen, India: Economic Development and Social Opportunity,Clarendon, 1995
Saima Saeed, Screening the Public Sphere: Media and Democracy in India,2013

Nick Stevenson, Understanding Media Cultures, 2002

Fuller, C.J. (ed.) Caste Today, Oxford University Press, 1997

Himat Singh, Green Revolution Reconsidered: The Rural World of Punjab, OUP, 2001.

Jagdish Bhagwati, India in Transition: Freeing The Economy, 1993.

Joseph E. Stiglitz, Globalisation and its Discontents, WW Norton, 2003.

Patel, I.G., Glimpses of Indian Economic Policy: An Insider View, OUP, 2002.

Rajni Kothari and Clude Alvares, (eds.) Another Revolution Fails: an investigation of how and why India's Operation Flood Project Touted as the World's Largest Dairy Development Program Funded by the EEC went off the Rails, Ajanta, New Delhi, 1985.

Smitu Kothari, Social Movements and the Redefinition of Democracy, Boulder, Westview, 1993.

Qah, John S.T., Curbing Corruption in Asia: A Comparative Study of Six Countries, EasternUniversity Press, 2003.

Vasu Deva, E-Governance In India : A Reality, Commonwealth Publishers,2005

M.J.Moon, The Evolution of Electronic Government Among Municipalities: Rhetoric or Reality, American Society For Public Administration, Public Administration Review, Vol 62, Issue 4, July – August 2002

Pankaj Sharma, E-Governance: The New Age Governance, APH Publishers,2004

Pippa Norris, Digital Divide: Civic Engagement, Information Poverty and the Internet in Democratic Societies, Cambridge: Cambridge University Press, 2001.

Ghanshyam Shah [ed.], Social Movements and The State, Sage Publication, 2002

Su H. Lee, Debating New Social Movements: Culture, Identity, and Social Fragmentation ,Rawat Publishers, 2010

S. Laurel Weldon ,When Protest Makes Policy : How Social Movements Represent Disadvantaged Groups, Michigan Publishers, 2011

Richard Cox, Production, Power and World Order, New York, Columbia University Press,1987

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Semester-VI
(Paper-2)

Understanding Globalization

1. Introduction
    a. Meaning and trajectory of Globalization
    b. Dimensions- Economic, Political, Technological and Cultural
    c. Changing character of State in era of globalization
    d. Consequences of globalization

2. Contemporary World Actors
    a. United Nations
    b. World Trade Organisation (WTO)
    c.Group of 77 Countries (G-77)

3. Contemporary World Issues
    a . Environmental Issues- Global Warming, Bio-diversity, Resource Scarcities
    b .Poverty and Inequality
    c . International Terrorism

4. Anti- Globalization Movement
    Grounds for opposing Globalization
    Alternates to Globalization

Essential Readings

Lechner, F. J. and Boli, J. (eds.) (2004) The Globalization Reader. 2nd Edition. Oxford: Blackwell.

Held, D., Mc Grew, A. et al. (eds.) (1999) Global Transformations Reader. Politics, Economicsand Culture, Stanford: Stanford University Press, pp. 1-50.

Viotti, P. R. and Kauppi, M. V. (2007) International Relations and World Politics-Security, Economy, Identity. Third Edition. Delhi: Pearson Education, pp. 430-450.

Baylis, J. and Smith, S. (eds.) (2011) The Globalization of World Politics: An Introduction to International Relations. Fourth Edition. Oxford: Oxford University Press, pp. 312-329;50-385; 468-489.

Tickner, J.A. (2008) 'Gender in World Politics', in Baylis, J. and Smith, S. (eds.) The Globalization of World Politics: An Introduction to International Relation. 4th Edition. Oxford: Oxford University Press.

Taylor, P. and Grom, A.J.R. (eds.) (2000) The United Nations at the Millennium. London: Continuum. pp. 1-20.

Ravenhill, J. (2008) 'The Study of Global Political Economy', in Ravenhill, John (ed.) Global Political Economy. Second Edition. New York: Oxford University Press, pp. 18-24.

Sauvant, K. (1981) Group of 77: Evolution, Structure and Organisation, New York: Oceana Publications.

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Roberts, J.M. (1999) The Penguin History of the 20th Century. London: Penguin.

Smith, M., Little, R. and Shackleton, M. (eds.) (1981) Perspectives on World Politics. London: Croom Helm.

White, B. et al. (eds.) (2005) Issues in World Politics. Third Edition, New York: Macmillan, pp. 74-92; 191-211.

Halliday, F. (2004) 'Terrorism in Historical Perspective', Open Democracy. 22 April, available at:

http://www.opendemocracy.net/conflict/article_1865.jsp

Thomas, C. (2005) 'Poverty, Development, and Hunger', in Baylis, J. and Smith, S. (eds.) The Globalization of World Politics. Third Edition. New Delhi: Oxford University Press, pp. 645-668.

Vanaik, A. (2007) 'Political Terrorism and the US Imperial Project', in Masks of Empire. New Delhi: Tulika Books, pp. 103-128.

Art, R.J. and Jervis, R. (eds.) (1999) International Politics: Enduring Concepts and Contemporary Issues. 5th Edition. New York: Longman, pp. 495-500; pp.508-516.

Semester-VI
(Paper-3)

Local Governments in India

I. Introduction

Meaning, Features and importance of Local Governments.
Evolution of Local Governments, Constitutional Status of Local Governments
Recommendations of Balwanth Roy Mehta and Ashok Mehta Committee.

II. Rural Local Governments

73rd Constitutional Amendments-features and prospects.
Zilla Panchayat, Talluck Panchayat &Village Panchayat: Composition, Powers &Functions.
Rural Development Programmes- Housing, Health, Education and Agriculture.
Sources of Revenue of the Rural Local Governments

III. Urban local Governments

74th Constitutional Amendments-features and prospects.
Corporation, Municipal Council and Town Panchayat: Composition, powers & Functions
Urban Development Programmes- Housing, Health, Education and Environment
Sources of Revenue of the Urban local Governments

IV. Issues in Local Governance

Autonomy and Accountability of Local Governments,
Relations between Peoples' Representative and Bureaucracy
Empowerment of the Marginalized Sections of the Society.
Electoral Politics, Role of Political Parties and Pressure Groups.

References

1. Maheshwari S R, Local Government in India, New Delhi, Orient Longman, New Delhi, latest edition.
2. R.P Joshi & G.S. Narwani, Panchayati Raj in India: Emerging Trends, Rawat Publications, Jaipur, 2002
3. Mishra, S.N., Dreams and Realities: Expectation from Panchayati Raj, New Delhi, IIPA, 1996
4. 73rd and 74th Constitutional Amendment Act, 1992
5. S.N. Jha and P.C. Mathur, Decentralization and Local Politics, New Delhi, Sage, 1999
6. S.R. Maheswari, Local Government in India, Lakshmi Narain Agarwal, Agra, 2003
7. T.N. Chaturvedi and A. Dutta (ed), Local Government IIPA, New Delhi.

8. Mohit Bhattacharya, Management of Urban Government in India, Uppal Book Store, New Delhi.
9. M.A. Muttalib and MA Khan, Theory of Local Government, Sterling Publishers Pvt. Ltd. New Delhi.
10. R.B. Das and D.P. Singh , Deliberative and Executive wings in Local Government, Institute of Public Administration, Lucknow.
11. A History of Local Self Government in Rural Karnataka- -Dr. M. Umapathi
12. Staliya Sarkaragalu- HT Ramakrishna, KJ Suresh, Lohithashwa, U Gurumurthy.

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Semester-VI
(Paper-4)

Foreign Policy of India

I. Historical Evolution, Basic Features, Principles and Objectives,
Role of Jawaharlal Nehru,
Non-Alignment and Pancha Sheel.

II. Determinants of Foreign Policy of India:
Domestic Factors: Geography, History, Culture, Society and Politics
External Factors: Global, Regional and Bilateral
Governmental Machineries of Making Foreign Policy

III. India and the Nations
Indo-US Relations
Indo- Russian Relations
Indo-China Relations
Indo- Pakistan Relations

IV. India and Regional Organizations
NAM, ASEAN, SAARC,
The Commonwealth and Central Asian Republics

Books & Reference -

1) The making of India's Foreign Policy – J Bandopadhyaya
2) India's Search for Power – Surjeetman Singh
3) India's Foreign Policy – edited b by Bimal Prasad
4) India's Foreign Policy – V.P. Dutt
5) Realities of India's Foreign Policy – N.M. Khilnani
6) Studies in India's Foreign Policy – S. Chopra
7) India's Foreign Policy and Relations – A. Appadorai and M.S. Rajan
9) Indian Foreign Policy in a Unipolar World, Harsh V. Pant
10) Domestic Roots of India's Foreign Policy, A.Appadorai
11). India's Foreign Policy in a Changing World, V.P Dutta,
12) India's Foreign Policy: The Nehru Years, B.R Nanda,
೧೩. ಡಾ.ಪಿ.ಎಸ್.ಜಯರಾಮು - ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು
೧೪. ಹೆಚ್ . ಟಿ. ರಾಮಕೃಷ್ಣ– ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಬಂಧಗಳು

Generic Electives papers (GE-1)

V- Sem – Indian Administration

1. Meaning, Features and Functions of Civil Service
   Growth of Civil Service in India, types of Civil Service in India,
   Union Public service Commission-Composition and Functions

2. Central Administration
   Central Secretariat, Cabinet Secretary
   Ministry of Home affairs, Ministry of Personnel Public Grievances and Pensions,

3. State Administration
   State Secretariat, Chief Secretary
   District as a unit of Administration.
   Powers and Functions of Deputy Commission

4. Administrative organization at Taluk and Panchayat levels
   Powers and Functions.

References:

1. Central Administration-A.Avasthi.
2. Constitution & Government in India-M.V. Pylee.
3. Indian Administration-S.R. Maheshwari.
4. Indian Constitution-M.V.Pylee.
5. Indian Administrative System-R.K.Arora.
6. Government of India-India 2000(Government of India Publications).
7. Public Administration in India, Theory and Practical-Horhiar Singh
   And Mohindar Singh.
8. Indian Administration-Ashok Chandra.
9. Indian Administration-D.D.Basu.

Generic Electives papers (GE-2)

VI- Sem – Human Rights Gender and Environment

I Understanding Social Inequality

- Caste, Gender, Ethnicity and Class as distinct categories and their interconnection.
- Globalisation and its impact on workers, peasants, dalits, adivasis and women.

II Human Rights

- Human Rights: Various Meanings
- UN Declarations and Covenants
- Human Rights and Citizenship Rights
- Human Rights and the Indian Constitution
- the role of the National Human Rights Commission.
- Consumer Rights: The Consumer Protection Act and grievance redressal mechanisms.
- Human Rights Movement in India.

III Gender

- Analyzing Structures of Patriarchy
- Gender, Culture and History
- Economic Development and Women
- The issue of Women's Political Participation and Representation in India
- Laws, Institutions and Women's Rights in India
- Women's Movements in India

IV Environment

- Environmental and Sustainable Development
- UN Environment Programme: Rio, Johannesburg and after.
- Issues of Industrial Pollution, Global Warming and threats to Bio – diversity
- Environment Policy in India
- Environmental Movement in India

Essential Readings

Agarwal, Anil and Sunita Narain (1991), *Global Warming and Unequal World: A Case of Environmental Colonialism*, Centre for Science and Environment, Delhi.

Baxi, Upendra (2002), *The Future of Human Rights*, Oxford University Press, Delhi.

Beteille, Andre (2003), *Antinomies of Society: Essays on Ideology and Institutions*, Oxford University Press, Delhi.

Geetha, V. (2002) *Gender*, Stree Publications, Kolkata.

Ghanshyam Shah, (1991) *Social Movements in India*, Sage Publications, Delhi.

Guha, Ramachandra and Madhav Gadgil, (1993) *Environmental History of India*, University of California Press, Berkeley.

Haragopal, G. (1997) *The Political Economy of Human Rights*, Himachal Publishing House, Mumbai.

Menon, Nivedita (ed) (2000) *Gender and Politics in India*, Oxford University Press, Delhi.
Patel, Sujata et al (eds) (2003) *Gender and Caste: Issues in Contemporary Indian Feminism*, Kali for Women, Delhi.

Shah, Nandita and Nandita Gandhi (1992) *Issues at Stake: Theory and Practice in the Contemporary Women's Movement in India*, Kali for Women, Delhi.

Gonsalves, Colin (2011) Kaliyug: The decline of human rights law in the period of globalization Human Rights Law Network, New Delhi.

Sen, Amartya, Development as Freedom (1999) New Delhi, OUP.

Tel. No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005

Dated: 09.10.2018

No.AC.2(S)/31/18-19

REVISED NOTIFICATION

Sub: Revision of syllabus of B.Sc. Chemistry from the academic year 2018-19.

Ref: 1. Letter dated 14.09.2018 received from the Chairman, Department of Studies in Chemistry, Manasagangotri, Mysore.
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.
3. Decision of the Deans committee meeting held on 22.05.2018.
4. University notification no. AC2(S)/31/18-19 Dated: 15.06.2018.
5. Decision of the Academic council meeting held on 15.09.2018.

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Decision of the Deans committee meeting hold on 08-09-2018, The Chairman, Department of Studies in Chemistry, Manasagangotri, Mysore has recommended to revise the B.Sc. Chemistry course syllabus and scheme of examination as per CBCS pattern from the academic year 2018-19.

The Academic Council at its meeting held on 15th September 2018 has also approved the above said proposal and the same is hereby notified.

The University notification cited under reference (4) has been withdrawn.

The revised syllabus is annexed herewith and the contents may be downloaded from the University website i.e. **www.uni-mysore.ac.in**.

Draft approved by the Registrar

Deputy Registrar (Academic)

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Zoology. Manasagangotri, Mysore.
3. The Chairperson, BOS in Chemistry, DOS in Chemistry, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Chemistry, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.

UNIVERSITY OF MYSORE

CHOICE BASED CREDIT SYSTEM (CBCS) SYLLABUS

Continuous Assessment and Grading Pattern (CAGP)

UG Program, Faculty of Science and Technology 2018-19

CHEMISTRY

FOR B.Sc. DEGREE PROGRAMME

2018-19

GENERAL REQUIREMENTS

Scheme of Instructions

1. **Title and Commencement**: As per the university guidelines (12 Ref. letter UA2/379/2016-17)

2. Undergraduate programme offered:

2.2 Faculty of Science

I. Bachelor of Science (B.Sc. 6 Semesters)

3. **<u>Semester and Programme Structure</u>**

The credit pattern for the course is L:P

Course structure in chemistry

Semester	Course opted	SEC Course (2 Credits each)	Credits
I	Core course-DSC-2A		4 (L) + 2 (P)=6
II	Core course- DSC-2B		4 (L) + 2 (P)=6
III	Core course- DSC-2C		4 (L) + 2 (P)=6
IV	Core course- DSC-2D		4 (L) + 2 (P)=6
V	Core course- DSE-2A	SEC- 1 and SEC-2	4 (L) + 2 (P)=6+SEC
VI	Core course- DSE-2B	SEC-3 and SEC-4	4 (L) + 2 (P)=6+SEC
		Total Credits	**36 + Credits from SEC**

4. Definitions:

4.1**. DSC**: Discipline Specific Course:

DSE: Discipline Specific Elective

SEC: Skill Enhancement Course

5. Subject Combinations: As per the university guidelines (Ref. letter

UA2/379/2016-17)

6. **Eligibility for Admission**

For B.Sc program only those students who have completed PUC or its equivalent examination with Science subjects are eligible.

7. Medium of Instruction: The medium of instruction shall be English/Kannada.

8. Scheme of the Program: As per the university guidelines (Ref. letter UA2/379/2016-17)

9. Course Registration: As per the university guidelines (9.1 to 9.6 Ref. letter UA2/379/2016-17)

10. **Attendance:** As per the university guidelines (10.1 and 10.2 Ref. letter UA2/379/2016-17)

11. Continuous Assessment:

11.1. C1 marks should be considered by conducting a test in the respective topics. C2 marks can be considered by conducting test/Assignment/Seminar /Dissertation.

11.2. The first component, C1 of assessment is for 10% (includes Theory and Practicals). This should be completed during the eighth week of the semester

11.3. The second component, C2 of assessment is for 10% (includes Theory and Practicals). C2 will be completed during the fifteenth week of the semester.

11.5. As per the university guidelines (11.5 Ref. letter UA2/379/2016-17)

11.6. The scheme of evaluation for C1, C2 and C3 component of the theory and

practicals are given in the table below.

Scheme of Examination for DSC and DSE

Credits L : P	**Maximum marks in the C1, C2 and C3 components (I to VI semesters)**			**Duration of examination**
4 : 2	C1 Marks	C2 Marks	C3 Marks	Theory: 3hrs Practical:3 hrs
	Theory:5 Practical:5 Total=10	Theory:5 Practical:5 Total=10	Theory:60 Practical:20 Total=80	

C3 is final examination Marks.

Scheme of Examination for SEC

Credits L : P	Maximum marks in the examination / Assessment			Duration of examination
2 : 0	C1	C2	C3	2 Hours
	5	5	40	

C3 is final examination Marks

12. Evaluation of C1 and C2

As per the university guidelines (12 Ref. letter UA2/379/2016-17)

13. Examination and Evaluation for C3

13.1. a) The question paper pattern for C3 component is given below

Question Paper Pattern for DSC (Semester I to IV)

Duration: 3 Hr **Max. Marks: 60**

The question paper contains 5 parts.

Part –A (Compulsory)
Four questions carrying 1 mark each. 4 x 1 = 04

Part –B (Inorganic Chemistry)
Answer any 2 out of 3 questions. 2 x 7 = 14

Part –C (Organic Chemistry)
Answer any 2 out of 3 questions. 2 x 7 = 14

Part –D (Physical Chemistry)
Answer any 2 out of 3 questions. 2 x 7 = 14

Part –E (General Chemistry)
Answer any 2 out of 3 questions. 2 x 7 = 14

Pattern: (2 + 2 + 3) / (4 + 3) / (5+2)

Question Paper Pattern for DSE (Semester V to VI)

Duration: 3 Hr **Max. Marks: 60**

The question paper contains 4 parts.

Part –A (Compulsory)
Six questions carrying 1 mark each. 6 x 1 = 06

Part –B (Inorganic Chemistry)
Answer any 2 out of 3 questions. 2 x 9 = 18

Part –C (Organic Chemistry)
Answer any 2 out of 3 questions. 2 x 9 = 18

Part –D (Physical Chemistry)
Answer any 2 out of 3 questions. 2 x 9 = 18

Pattern: (5 + 4) / (3 + 3 + 3) / (3 + 2 + 4) / (5+ 2+2) / (6+3)

Question Paper Pattern for SEC

Duration: 2 Hr **Max. Marks: 40**

Answer any 4 out of 6 questions. 4 x 10 = 40

Pattern: (5+3+2) / (4 + 4 + 2) / (3 + 3+ 4) / (2 + 2 + 3 + 3) / (5 + 5)

b) As per the university guidelines (13 Ref. letter UA2/379/2016-17)

13.2 Valuation: As per the university guidelines (Ref. letter UA2/379/2016-17)

14. As per the university guidelines (14 Ref. letter UA2/379/2016-17)

15. Passing Criteria

15.1. A student is considered to have passed the course, only on securing a minimum of 40% from C1, C2 and C3 put together from Theory and Practical.

15.2. A student can take C3 exam irrespective of the marks scored in C1 and C2 of a particular course

15.3. In case a student secures less than 30% in C3 or absent for C3, the student is said to have not completed the course. The student shall complete the course by reappearing only for C3 component of that course when university conducts.

15.4. As per the university guidelines (15. Ref. letter UA2/379/2016-17)

16. Makeup examination: As per the university guidelines (16. Ref. letter UA2/379/2016-17)

17. Percentage and Grading: As per the university guidelines (17 Ref. letter UA2/379/2016-17)

18 to 22. As per the university guidelines (Ref. letter UA2/379/2016-17)

I SEMESTER

CHEMISTRY –I (DSC-2A)

CLASS DURATION – THEORY: 04 HOURS/WEEK

PRACTICALS: 04 HOURS/WEEK

Theory and Practicals: 60 Hours each-Total Credits-06 (Theory-04, Practicals-02)

Discipline Specific Course (DSC-2A Chemistry) is a core course for I semester, which should be compulsorily studied by a student as a core requirement of the programme.

UNIT-I: Inorganic Chemistry

Atomic Structure: Review of Bohr's theory and its limitations, dual behaviour of matter and radiation, de Broglie's equation-derivation, Heisenberg's uncertainty principle. Hydrogen atomic spectra. Need of a new approach to Atomic structure. **[3 hours]**

Elements of Quantum chemistry- Schrodinger wave equation and meaning of various terms in it. Significance of ψ and ψ^2, Schrödinger equation for hydrogen atom.

Radial and angular parts of the hydogenic wave functions (atomic orbitals) and their variations for 1*s*, 2*s*, 2*p*, 3*s*, 3*p* and 3*d* orbitals (Only graphical representation). Radial and angular nodes and their significance.

Quantum numbers and their Significance. Shapes of *s*, *p* and *d* atomic orbitals, nodal planes.

Rules for filling up of electrons in various orbitals (Aufbau principle, Pauli's exclusion principle, Hund's rule of maximum multiplicity and n+l rule), Electronic configuration of the elements (up to Z=30) and anomalous electronic configurations.

Stability of half-filled and completely filled orbitals- concept of pairing and exchange energy.

[6 hours]

Periodic Table and Periodicity: Classification of elements into s, p, d, and f-blocks, cause of periodicity.

Atomic radius: Covalent, ionic, van der Waal's and crystal radii. Additive nature of covalent radii. Determination of ionic radii by Lande's method. Variation of covalent radii in a group and in a period- explanation for the observed trends. Comparison of the size of atoms with their corresponding anions and cations, variation of ionic radii in isoelectronic ions.

Ionization enthalpy: Successive ionization enthalpy, factors affecting ionization enthalpy, applications of ionization enthalpy. Variation in a group and in a period – explanation for the observed trends.

Electron gain enthalpy: Successive electron gain enthalpy, variation of electron gain enthalpy in a period and in a group- explanation for the observed trends.

Electronegativity: Variation of electronegativity in a group and in a period- explanation for the observed trends. Factors determining electro negativity (charge on the atom and hybridization). Pauling, Mulliken and Alfred-Rochow scale of electronegativity. Applications of electronegativity. **[6 hours]**

UNIT-II : Organic Chemistry

Basic Concepts in Organic Chemistry: Bond cleavage, reactive intermediates, Generation, stability and reactions involving carbocations, carbanions, free radicals, nitrenes and carbenes. **[3 hours]**

Types of organic reactions: Definition with examples of addition, substitution, elimination, isomerisation, condensation and rearrangement reactions with examples. **[2 hours]**

Electronic effects : Electronic displacement effects: Inductive Effect, Electromeric Effect, Resonance, Hyperconjugation and their significance. **[3 hours]**

Alkanes: Preparation by Corey-House reaction, conversion of alkanes to aromatic compounds via alkenes and alkynes- aromatization and pyrolysis.

Alkenes: Preparation of alkenes by Wittig's reaction, Hoffmann's elimination, Stereoselectivity. Mechanism of electrophillic addition, oxymercuration, reduction, hydroboration – oxidation and epoxidation. Mechanism of oxidation with $KMnO_4$ and OsO_4, ozonolysis. Industrial applications of ethene and propene.

Dienes: Types, relative stabilities of dienes, conjugated dienes – 1,3 butadiene-structure, 1,2 and 1,4-addition reactions with H_2 and halogens, Diel's Alder reaction with an example.

Alkynes: Methods of preparation – Dehydrohalogenation, vicinal and gem dihalides, reactions of alkynes – Electrophillic additions with HCN, CH_3COOH and H_2O polymerization.

[**7 hours]**

UNIT-III : Physical Chemistry

Indicators: Definition, types (acid-base, redox, adsorption indicators), examples for each type. Theory of indicators – Oswald's theory and Quinonoid theory – indicator constant – action of phenolphthalein and methyl orange in acid-base solutions – pH titration curves for strong acid vs strong base, weak acid vs strong base, weak base vs strong acid, choice of indicators in these types of titrations. Calculation of pH in mixture of acid and base. [**5 hours]**

Liquid mixtures: Classification of binary mixtures – partially miscible, completely miscible and completely immiscible pairs of liquids (explanation with examples for each type).

Partially miscible liquids: Critical solution temperature (CST) – types – phenol-water system, triethylamine-water system, nicotine-water system (mutual solubility temperature (MST) vs composition curves to be drawn). Effect of addition of non-volatile solute on CST. Binary mixtures of completely miscible liquids.

Vapour pressure – definition, vapour pressure – composition diagrams and boiling point – composition diagrams. Classification into the types – obeying Raoult's law (type I), showing positive deviation from Raoult's Law (type II) and showing negative deviation from Raoult's Law (type III) – examples for each type.

Principles of fractional distillation: Fractional distillation of type I, type II and type III liquid mixtures (with examples). Azeotropic mixtures (definition).

Binary mixtures of completely immiscible liquids (with examples), weight fraction of distillates (no derivation), principle of distillation, applications (numerical problem on weight fractions of components). [**6 hours]**

Distribution Law: Nernst distribution law – statement, distribution coefficient, verification of distribution law taking distribution of I_2 in H_2O and CCl_4 – limitations of the law, conditions for the validity of distribution law, association of the solute in one of the solvents, dissociation of the solute in one of the solvents, application of distribution law with respect to solvent extraction process (numerical problems) [**4 hours]**

UNIT-IV: General Chemistry

Purification of compounds: Crystallisation, fractional crystallization, distillation, steam distillation, fractional distillation and distillation under reduced pressure, sublimation techniques with suitable examples. [**4 hours]**

Stoichiometry : Mole concept, Concentration terms: normality, molarity, molality, molefraction and ppm(Problems to be worked). Calculation of equivalent mass (acids, bases, salts, oxidising and reducing agents) and oxidation number of element in a molecule. Applications of oxidation number, balancing of redox reactions by oxidation number method. Oxidation number and valency (comparison). [**8 hours]**

Introduction to organic chemistry- Definition and importance of organic compounds to life and applications in food, fuels, textiles, dyes, drugs and cosmetics with examples. Nomenclature(IUPAC) of bifunctional, aliphatic and aromatic compounds. [**3 hours]**

I Semester Practicals

CHEMISTRY-DSC 2A LAB

VOLUMETRIC ANALYSIS

Practical duration: 1 practical per week of 4 hrs

60 Hours (Credits: 02)

Acidimetry/Alkalimetry Titrations:

1. Preparation of standard sodium carbonate solution and standardization of hydrochloric acid solution (methyl orange indicator). Estimation of sodium hydroxide present in the solution using phenolphthalein indicator.
2. Preparation of standard oxalic acid solution and standardization of sodium hydroxide solution. Estimation of sulphuric acid present in the solution.
3. Preparation of standard potassium biphthalate solution and standardization of sodium hydroxide solution. Estimation of oxalic acid present in the solution.
4. Estimation of NaOH and Na_2CO_3 in a mixture (or caustic soda) by double indicator method using approximately 0.1N HCl.
5. Estimation of ammonium chloride using 0.05N sodium hydroxide and 0.1N hydrochloric acid solutions (back titration).

Permanganometry Titrations:

6. Preparation of standard oxalic acid solution and standardization of potassium permanganate solution. Estimation of ferrous ammonium sulphate present in the solution.
7. Preparation of standard oxalic acid solution and standardization of potassium permanganate solution. Estimation of hydrogen peroxide present in the solution.
8. Estimation of sulphuric acid and oxalic acid in a mixture using standard sodium hydroxide and standard potassium permanganate solutions.

Dichrometry Titrations:

9. Preparation of std. potassium dichromate solution and estimation of ferrous ammonium sulphate present in the solution using potassium ferrocyanide as an external indicator.
10. Estimation of ferrous and ferric iron in a given mixture using standard potassium dichromate solution.
11. Preparation of standard FAS and estimation of potassium dichromate solution using N-phenyl anthranilic acid as an indicator.

Iodometry Titrations-

12. Determination of BOD in sewage water.
13. Determination of dissolved oxygen in sewage water.
14. Estimation of copper in $CuSO_4$ using potassium dichromate crystals and approximately 0.1N sodium thiosulphate solution.

Complexometric Titration-

15. Preparation of zinc sulphate solution and standardization of EDTA. Estimation of total hardness of water.

II SEMESTER

CHEMISTRY –II (DSC-2B)

CLASS DURATION – THEORY: 04 HOURS/WEEK

PRACTICALS: 04 HOURS/WEEK

Theory and Practicals: 60 Hours each-Total Credits-06 (Theory-04, Practicals-02)

Discipline Specific Course (DSC-2B Chemistry) is a core course for II semester, which should be compulsorily studied by a student as a core requirement of the programme.

UNIT-I: Inorganic Chemistry

Chemical Bonding and Molecular Structure

Ionic Bonding: Definition and explanation with suitable examples. General characteristics of ionic bonding. Energy considerations in ionic bonding, lattice energy and solvation energy and their importance in the context of stability and solubility of ionic compounds. Born-Landé equation for calculation of lattice energy, Born-Haber cycle and its applications, polarizing power and polarizability.

Fajan's rules, ionic character in covalent compounds, bond moment, dipole moment and percentage ionic character. **[4 hours]**

Covalent bonding: Definition and explanation with suitable examples, factors favouring the formation of covalent bond. Valance bond approach -Shapes of some inorganic molecules and ions on the basis of VSEPR theory(NH_3, H_2O,SO_4^{2-} & ClO_4^-). Hybridization of linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements($BeCl_2$, BF_3, $[Ni(CN)_4]^{2-}$, $SiCl_4$, PCl_5 and SF_6 respectively). **[4 hours]**

Concept of resonance and resonating structures in various inorganic compounds and ions (CO, CO_2, N_2O, SO_3^{2-}, CO_3^{2-}). **[2 hours]**

MO approach: Rules for the LCAO method, bonding and antibonding MOs and their characteristics for s-s, s-p and p-p combinations of atomic orbitals, nonbonding combination of orbitals, MO treatment of homonuclear diatomic molecules of 1st and 2nd periods (H_2, He_2, He_2^+, N_2, O_2 and F_2) (including idea of *s-p* mixing) and heteronuclear diatomic molecules such as CO, NO and NO^+. Comparison of VB and MO approaches. **[5 hours]**

UNIT-II : Organic Chemistry

Cycloalkanes: Sache-Mohr theory. Conformation of cyclopentane and cyclohexane, mono and disubstituted cyclohexane. Conformational analysis of butane and ethylene glycol with energy profile diagram. **[4 hours]**

Aromatic hydrocarbons: Nomenclature of benzene derivatives, Huckel's rule with respect to benzenoids, (benzene, naphthalene, anthracene and phenanthracene) and non-benzenoid compounds (cyclopentadienyl anion, cycloheptadienyl cation) anti-aromaticity. Annulenes (14 to 18 carbon atoms)

Aromatic electrophillic substitution – General mechanism, electronic interpretation of orientating influence of electron donating groups (-CH_3, -Cl, -NH_2 and -OH groups) and electron withdrawing groups (-NO_2, -CHO, -COOH and –SO_3H groups) on electrophillic substitution reactions. **[4 hours]**

Hydrogenation of aromatic compounds: Birch reduction, side chain oxidation of toluene to benzaldehyde and benzoic acid. Resonating structures of benzene, naphthalene and anthracene. Diel's Alder reactions of anthracene with maleic anhydride.

Biphenyls: Preparation – Ullmann reaction.

Alkenyl Benzenes: Preparation of stilbene (one method), Cis-trans isomers of stilbene **[3 hours]**

Organic halides: Alkyl halides: isomerism and classification, elimination reaction: dehydrohalogenation. Saytzeff rule, Nucleophilic substitution reaction. S_N1 and S_N2 with energy profile diagram. Effect of nature of alkyl groups, nature of leaving groups, nucleophiles and solvents. **[4 hours]**

UNIT-III: Physical chemistry

Chemical Kinetics: Introduction – differential and integrated rate equations for second order kinetics, derivation of second order rate equation when a=b and a≠b, unit of rate constant, half-life period, problems. Experimental verification of second order reactions – study of kinetics of saponificaiton of an ester, determination of the order of reaction – differential, time for half-change method and isolation method. Effect of temperature on rate of a reaction, Arrhenius equation, concept of activation energy, problems. Theories of reaction rates-simple collision theory and transition state theory, comparison of two theories. Experimental methods of chemical kinetics, conductometric – example - saponification of esters and spectrophotometric – example – colorimetric study of kinetics of oxidation of Indigocarmine by chloramine-T.

[**9 hours]**

Ionic equilibria: Debye-Huckel theory of strong electrolytes (relaxation time effect, electrophoretic effect and viscous effect). Debye-Huckel-Onsagar equation (no derivation), Debye-Huckel Limiting equation for activity coefficients (no derivation). Hydrolysis of salts – (four types) derivation - degree of hydrolysis and its relationship with K_h, effect of temperature and dilution on degree of hydrolysis. Relationship between K_h, K_w, K_a and K_b. pH of salt solutions and problems. [**6 hours]**

UNIT-IV: General Chemistry

Preparation and synthetic applications of organic reagents – acetyl chloride, acetic anhydride, benzoyl chloride, Raney Nickel, Dimethyl sulphate, Lithium aluminium hydride. [**2 hours]**

Polymers: Introduction, monomer, repeating units, types (linear, branches and network) with examples, degree of polymerization, classification (arrangement and shape) with examples, polymerization reaction (addition and condensation), molar masses of polymers – types (number average and mass average), determination of molar mass (viscosity and osmotic pressure method) (Numerical problems). [**5 hours]**

Organic reagents in inorganic analysis- Advantages of organic precipitants over inorganic precipitants, DMG, 8-hydroxy quinoline (Oxine), 1,10-phenanthroline and EDTA. Structure of Ni^{2+}-DMG and Mg^{2+}-oxine complexes. [**3 hours]**

Soaps, detergents and waxes : definition and types of soaps, manufacture of soap by hot process, cleansing action of soap. Detergents, types with examples. Differences between soaps and detergents. Waxes – Definition, types with examples. [**5 hours**]

II Semester Practicals

CHEMISTRY-DSC 2B LAB

Practical duration: 1 practical per week of 4 hrs

60 Hours (Credits: 02)

SYSTEMATIC ANALYSIS OF ORGANIC COMPOUNDS AND ORGANIC PREPARATION

Part 1: Systematic qualitative organic analysis of the following compounds (Minimum10 compounds).

1. Acids
2. Alcohols
3. Aldehydes
4. Amides
5. Amines
6. Halogenated hydrocarbons
7. Hydrocarbons
8. Ketones
9. Nitro compounds
10. Phenols

Part 2: Organic preparations: Recrystallisation and determination of melting point and its importance may be mentioned

1. Acetylation : Preparation of acetanilide from aniline.
2. Oxidation: Preparation of benzoic acid from benzaldehyde.
3. Nitration : Preparation of m-dinitrobenzene from benzene.
4. Hydrolysis : preparation of benzoic acid from ethyl benzoate.
5. Bromination : Preparation of 2,4,6-tribromophenol.
6. Glucosazones : extraction of glucose from cane sugar.
7. Diazotization : preparation of methyl orange.

Note: Preparation-equation, recrystallisation, theoretical and practical yield.

III SEMESTER

CHEMISTRY –III (DSC-2C)

CLASS DURATION – THEORY: 04 HOURS/WEEK

PRACTICALS: 04 HOURS/WEEK

Theory and Practicals: 60 Hours each-Total Credits-06 (Theory-04, Practicals-02)

Discipline Specific Course (DSC-2C Chemistry) is a core course for III semester, which should be compulsorily studied by a student as a core requirement of the programme.

UNIT-I: Inorganic Chemistry

Chemistry of transition elements: Position in the periodic table, electronic configuration, general characteristics- atomic and ionic radii, ionization energy, variable oxidation states, spectral properties, redox potentials, colour and magnetic properties, catalytic activity, complex formation and interstitial compounds formation (3d, 4d and 5d series).

Chemistry of inner transition elements: Electronic configuration and position in the periodic table, oxidation states, spectral properties, colour and magnetic properties, complex formation and ionic radii, lanthanide contraction – cause and its consequences. General survey of actinides – comparison with lanthanides, transuranic elements. **[10 hours]**

Organometallic Compounds

Definition and Classification with appropriate examples based on nature of metal-carbon bond (ionic, s, p and multicentre bonds). Structures of methyl lithium, Zeiss salt and ferrocene. EAN rule as

applied to carbonyls. Preparation, structure, bonding and properties of mononuclear and polynuclear carbonyls of 3d metals. p-acceptor behaviour of carbon monoxide. [**5 hours]**

UNIT-II: Organic Chemistry

Alcohols: Definition and classification.

Monohydric alcohols: Preparation of alcohols by Hydroboration-oxidation method. Hydration of alkenes. Distinction tests between 1°, 2°, and 3° alcohols by Victor Meyer and oxidation method. Conversion of 1° to 2°, 2° to 3° and 1° to 3° alcohols. Dehydration of 1°, 2°, 3° alcohols and comparison of their rates.

Dihydric alcohols: Glycol – preparation from vicinal dihalides and uses. Pinacoles – synthesis, mechanism of pinacol-pinacolone rearrangement

Trihydric alcohols: Glycerol, synthesis from propene, reactions with HNO_3, H_2SO_4, oxalic acid and HI. Uses of glycerol. **[4 Hours]**

Phenols: Definition, classification with examples, acidity of phenols, effect of substituents on acidity of phenols. Mechanism of Reimer-Tiemann reaction and Kolbe reaction. Fries and claisen rearrangement with examples. conversion of phenol to phenolphthalein and fluoroscein.

[4 Hours]

Ethers: Nomenclature, Williamson ether synthesis, reactions – cleavage and auto-oxidation-Ziesel's method.

Epoxides: Synthesis by Darzen's method. Acid and base catalyzed opening of epoxides.

Crown ethers: Introduction with examples. **[3 Hours]**

Carbonyl Compounds: Distinction between aldehydes and ketones – oxidation and reduction method. Addition of alcohols- formation of hemiacetal and acetal. Condensation with NH_2OH and 2,4-DNP. Mechanism of aldol condensation, Perkins reaction, Cannizzaro reaction, Claisen condensation, Knovenagel reaction. **[4 Hours]**

UNIT-III: Physical Chemistry

Second law of thermodynamics: Limitations of First Law of Thermodynamics – need for II Law of thermodynamics, spontaneous, non-spontaneous and equilibrium processes (definitions and examples for each), different ways of stating II Law, concept of entropy – definition and

physical significances of entropy – criteria of spontaneity in terms of entropy change, statements of II law in terms of entropy.

Free energy: Helmholtz and Gibb's free energy – their definitions and their relationship, Gibb's – Helmholtz equation at constant pressure and volume (derivations), thermodynamic criteria of equilibrium and spontaneity, variation of free energy with temperature and pressure, Claussius – Clappeyron equation (differential form to be derived), integrated form of Claussius – Clappeyron equation (to be assumed) and its applications (enthalpy of vapourization, boiling point and freezing point at different temperatures), (numerical problems on these applications)

Calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data. **[6 Hours]**

Crystallography: Amorphous and Crystalline solids, differences. Crystal systems and their characteristics, Elements of symmetry – plane, axis and centre, elements of symmetry in cubic crystals, law of rational indices – Weiss and Miller indices, Crystal systems and their characteristics,Crystal lattice and unit cell, types of Lattice – Bravais lattices, X-Ray diffraction and Bragg's Law (to be derived), determination of crystal structure of rock salt by rotating crystal method using Bragg's spectrometer, Structure of NaCl, KCl & CsCl (only qualitative), application of X-ray studies – distance between lattice planes, density of crystals, determination of Avogadro Number (numerical problems on applications), Qualitative treatment of Nernst heat theorem and III law of thermodynamics-statement only.

Liquid Crystals: Defintion, classification of thermotropic liquid crystals into smectic, nematic and cholesteric with examples-molecular arrangement of these and their uses. **[9 Hours]**

UNIT-IV: General Chemistry

Chromatography: Paper: introduction to ascending, descending and circular, R_f value and it's applications

TLC: Introduction and applications

Column Chromatography: Introduction, principle and experimental details and applications

Gas Chromatography: Introduction, apparatus, programmed temperature gas chromatography, quantitative analysis of GLC

HPLC: Introduction, schematic diagram of instrumentation and application. **[5 Hours]**

Energy sources-Dry cell, lead storage battery, solar cell and fuel cell. **[3 Hours]**

Nanotechnology: Definition, uses and nature of nanotechnology, **Nanomaterials**-definition, properties and applications, **Carbon nanotubes**- definition, types, methods of preparation (mention), properties and industrial applications of carbon nanotubes, **Nanowires**-definition, types, production of crystalline nanowires by vapour-liquid-solid synthesis method, applications of nanowires. **[4 Hours]**

Amino acids and proteins: Structure, classification with examples, peptide bond, N-protecting & C-protecting groups, peptide synthesis (Gly-Gly, Gly-Ala)

Proteins-types-based on functional properties. Denaturation, colour reaction (Biuret, Ninhydrin and Millon's test) **[3 Hours]**

III Semester Practicals

CHEMISTRY-DSC 2C LAB

Practical duration: 1 practical per week of 4 hrs

60 Hours (Credits: 02)

QUALITATIVE ANALYSIS OF INORGANIC SALT MIXTURE AND INORGANIC PREPARATION

Part 1: Systematic semi-micro Qualitative Analysis of Inorganic Salt Mixture containing two cations and two anions (Minimum 10 mixtures to be analysed).

The constituent ions in the mixture to be restricted to the following.

Anions: HCO_3^-, CO_3^{2-}, SO_4^{2-}, Cl^-, Br^-, NO_3^-, BO_3^{3-}, SO_4^{2-} and PO_4^{3-}

Cations: Pb^{2+}, Bi^{3+}, Cd^{2+}, Al^3+, Fe^{3+}, Fe^{2+}, Mn^{2+}, Zn^{2+}, Ba^{2+}, Sr^{2+}, Ca^{2+}, Mg^{2+}, K^+, Na^+ and NH_4^+

Note:

1. Mixtures requiring elimination of phosphate and borate should not be given.
2. Combination like Cl^- and Br^-, NO_3^- and Br^- shall be avoided.
3. Salts that yield double decomposition shall be avoided (like $CaSO_4$, $BaSO_4$, $PbSO_4$, $FeSO_4$).

4. The combination of two cations in the mixture should belong to different groups. However combinations like Mg^{2+} and NH_4^+ and Na^+ and NH_4^+ can be given.

Part 2: Inorganic preparations

1. Preparation of Chloropentaminecobalt(III)chloride.
2. Preparation of Cuprammoniumsulphate
3. Preparation of Ferric alum
4. Preparation of ferrousoxalate.
5. Preparation of Prussian blue (ferri ferrocyanide).

IV SEMESTER

CHEMISTRY –IV (DSC-2D)

CLASS DURATION – THEORY: 04 HOURS/WEEK

PRACTICALS: 04 HOURS/WEEK

Theory and Practicals: 60 Hours each-Total Credits-06 (Theory-04, Practicals-02)

Discipline Specific Course (DSC-2D Chemistry) is a core course for IV semester, which should be compulsorily studied by a student as a core requirement of the programme.

UNIT I : Inorganic Chemistry

Coordination Chemistry: Ligands, classification of ligands and chelation, nomenclature of co-ordination compounds, physical methods in the study of complexes – change in conductance, colour and pH. Stability of complexes – stability constant, a brief outline of thermodynamic stability of metal complexes, factors affecting the stability of complexes. Polynuclear complexes, inner metallic complexes.

Applications of complexes: Cis platin in cancer therapy, $Na_2CaEDTA$ in treatment of heavy metals (Pb & Hg) poisoning.

Isomerism in co-ordination complexes: Stereo-isomerism – Geometrical and optical isomerism exhibited by co-ordination compounds of co-ordination number 4 and 6. **[6 hours]**

Valence bond theory: Salient features, formation of octahedral complexes on the basis of VBT, outer and inner orbital octahedral complexes- $[Fe(CN)_6]^{4-}$, $[Fe(CN)_6]^{3-}$, $[Co(CN)_6]^{3-}$, $[CoF_6]^{3-}$ $[Cr(H_2O)_6]^{3+}$ and $[Fe(H_2O)_6]^{2+}$. Formation of tetrahedral and square planner complexes on the basis of VBT – $[Ni(CN)_4]^{2-}$, $[Cu(NH_3)]^{2+}$, $[Zn(NH_3)_4]^{2+}$and $[Ni(CO)_4]$, limitations of VBT.

[4 hours]

Crystal field theory: Important features of crystal field theory, crystal field splitting of d-orbitals in tetrahedral, octahedral and square planar complexes, crystal field stabilization energy (CFSE), factors affecting the magnitude of Δ_o, (nature of ligand, oxidation state of the metal ion, size of the orbitals, geometry of the complex), high spin (HS) and low spin (LS) complexes, magnetic properties of metal complexes based on crystal field theory-$[Co(NH_3)_6]^{3+}$, $[CoF_6]^{3-}$, $[Fe(CN)_6]^{4-}$, $[Fe(CN)_6]^{3-}$ and $[Ni(CN)_4]^{2-}$. Magnetic susceptibility, measurement of magnetic moment by Gouy's method. Limitations of CFT.

Ligand field theory: Evidences for metal ligand covalent bonding in complexes. **[5 Hours]**

UNIT II: Organic Chemistry

Stereochemistry: Introduction, definition, elements of symmetry (plane, centre, simple axes and alternative axes), asymmetry and dissymmetry, Chirality, designation of configuration (D-L and R-S). Optical activity – explanation – cause of optical activity (non-super impossibility). Enantiomers and diastereomers optical isomerism in tartaric acid and biphenyl compounds, racemisation, resolution, methods of resolution (Chemical and biochemical methods) Walden inversion, asymmetric synthesis (partial and absolute).

Geometrical isomerism: Definition with example, designation of cis-trans and E-Z notations with examples. Characteristics of geometrical isomers, Identification of geometrical isomers. Geometrical isomerism in aldoximes and ketoximes, Beckmann rearrangement with mechanism.

[8 Hours]

Carbohydrates: Definition and importance, classification based on composition with examples-reducing and non-reducing sugars.

Monosaccharides: Glucose: reactions of glucose (with H_2N-OH, HCN, $C_6H_5NHNH_2$, Br_2 water, Conc. HNO_3, reductions with HI/red P , methanol/dry HCl, acetic anhydride and reduction reactions.

Structural elucidation of glucose: Open chain structure, configuration, drawbacks of open chain structure, ring structure – Fisher and Haworth structure. Determination of ring size by methylation method.

Structural elucidation of fructose: Reactions of fructose, Fischer and Haworth structures, Fischer and Haworth structures of galactose and mannose.

Conversion reactions – 1. Ascending (Kiliani's synthesis) 2. Descending (Wohl's degradation) 3. Aldose to ketose 4. Ketose to Aldose 5. Epimerisation

Disaccharides: Structural elucidation of sucrose, structural formulae of maltose and lactose (Haworth structure).

Polysaccharides: Partial structural formulae of starch, cellulose, glycogen and their uses.

[**7 Hours]**

UNIT III: Physical Chemistry

Elementary Quantum Mechanics: black body radiation – Planck's Law, Photoelectric effect, Compton effect, Schrodinger's wave equation (no derivation) and its importance, Eigen function and Eigen values, significance of Ψ and Ψ^2, particle in one dimensional box (derivation), operators-linear, ∇ and ∇^2 and Hamiltonian operator. **[5 Hours]**

Electrochemistry-I: Introduction, conductance – specific conductance, equivalent conductance and molar conductance – their definitions and SI units. Conductivity cell and cell constant. Determination of equivalent conductance by meter – bridge method, ionic mobility, ionic conductance, Kohlrausch's law and its significance – determination of equivalent conductance at infinite dilution for weak electrolyte.

Transport number: Definition and explanation, anomalous transport number – explanation with examples – relationship between ionic conductance and transport number (to be derived), determination of transport number by moving boundary method – transport number of H^+ using $CdCl_2$ as supporting electrolyte (numerical problems on equivalent conductance, transport numbers and kohlrausch's law). **[6 Hours]**

Application of conductance measurements – (a) solubility and solubility product of sparingly soluble salt, (b) ionic product of water, (c) degree of ionization of weak electrolyte. Numerical problems.

Conductometric titration: strong acid vs strong base, weak acid vs strong base, strong acid vs weak base, weak acid vs weak base, with suitable examples for each. **[4 Hours]**

UNIT IV : General Chemistry

HSAB: Classification of acids and bases as Hard and Soft. Pearson's HSAB concept, acid-base strength, hardness and softness, symbiosis. **[3 Hours]**

Gravimetry: Introduction to gravimetric analysis – precipitation methods (various steps involved to be discussed), advantages of gravimetric analysis, purity of the precipitates, co-precipitation and post-precipitation, conditions of precipitation, precipitation from homogeneous solution (hydroxides and sulphates), washing and ignition of precipitate (general discussion only). Electro-gravimetric analysis-estimation of copper. [**4 Hours]**

Dyes: Colour and constitution, chromophore - Auxochrome theory, classification of dyes based on chromophore present and applications with examples, synthesis of indigo, malachite green, congo red, structural elucidation of alizarin and its synthesis. **[3 Hours]**

Physical Properties and chemical constitution: Additive and constitutive properties, properties of liquids – viscosity, definition of coefficient of viscosity, factors affecting viscosity – temperature, size and weight of molecules, intermolecular forces, determination of viscosity of liquids by Ostwald's method.

Surface tension: Definition, effect of temperature and solute on surface tension, determination of surface tension of liquids using stalagmometer.

Parachor: Definition – Sugden equation, calculation of parachor and its application with respect to structural elucidation of benzene and quinone, numerical problems based on surface tension, viscosity and parachor applications. **[5 Hours]**

IV Semester Practicals

CHEMISTRY-DSC 2D LAB

Practical duration: 1 practical per week of 4 hrs

60 Hours (Credits: 02)

Part 1:

1. Determination of the density using specific gravity bottle and viscosity of a liquid using Ostwald's viscometer.
2. Determination of the density using specific gravity bottle and surface tension of a liquid using stalagmometer.
3. Determination of molecular mass of a non-volatile solute by Walker-Lumsden method.
4. Determination of rate constant of the decomposition of hydrogen peroxide catalyzed by $FeCl_3$.
5. Determination of transition temperature of the salt hydrates($Na_2S_2O_3$,$SrCl_2$,CH_3COONa).
6. Determination of percentage composition of sodium chloride solution by determining the miscibility temperature of phenol - water system.
7. Estimation of the given strong acid using strong base by thermometric titration method [HCl X NaOH].
8. Study of kinetics of reaction between $K_2S_2O_8$ and KI, 2^{nd} order, determination of rate constant.

Part 2: Organic Estimations:

1. Estimation of glucose by Fehling solution method.
2. Estimation of ascorbic acid by iodometric method.
3. Determination of Iodine value of oils by chloramine-T.
4. Isolation of Caffeine from tea powder.
5. Estimation of neutral amino acids by titrametric method.
6. Estimation of carboxylic acid by titrametric method.
7. Determination of saponification value of oils.

V SEMESTER

CHEMISTRY –V (DSE-2A)

CLASS DURATION – THEORY: 04 HOURS/WEEK

PRACTICALS: 04 HOURS/WEEK

Theory and Practicals: 60 Hours each-Total Credits-06 (Theory-04, Practicals-02)

Discipline Specific Elective (DSE-2A Chemistry) is a course for V semester offered under the main Disciple/Subject of study or a Project/Dissertation, which should be compulsorily studied by a student as a core requirement of the programme

UNIT I: Inorganic Chemistry:

INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE

Silicate Industries

Glass: Raw materials, glassy state and its properties, classification (silicate and non-silicate glasses). Manufacture and processing of glass. Composition and properties of the following types of glasses: Soda lime glass, lead glass, armoured glass, safety glass, borosilicate glass, fluorosilicate, coloured glass, photosensitive glass.

Ceramics: Important clays and feldspar, ceramic, their types and manufacture. High technology ceramics and their applications, superconducting and semiconducting oxides, fullerenes carbon nanotubes and carbon fibre.

Cement: Classification of cement, ingredients and their role, Manufacture of cement and the setting process, quick setting cement. **[8 hours]**

Fertilizers:

Different types of fertilizers. Manufacture of the following fertilizers: Urea, ammonium nitrate, calcium ammonium nitrate, ammonium phosphates; polyphosphate, superphosphate, compound and mixed fertilizers, potassium chloride, potassium sulphate. **[5 hours]**

Surface Coatings:

Objectives of coatings surfaces, preliminary treatment of surface, classification of surface coatings. Paints and pigments-formulation, composition and related properties. Oil paint, Vehicle, modified oils, Pigments, toners and lakes pigments, Fillers, Thinners, Enamels, emulsifying agents. Special paints (Heat retardant, Fire retardant, Eco-friendly paint, Plastic paint), Dyes, Wax polishing, Water and Oil paints, additives, Metallic coatings (electrolytic and electroless), metal spraying and anodizing. **[7 Hours]**

UNIT II: Organic Chemistry

Terpenes: Definition, isoprene rule, classification, isolation (solvent extraction and steam distillation) structural elucidation of citral and its synthesis, structural formulae of α-terpeniol, camphor and menthol. **[3 Hours]**

Heterocyclic Compounds: Definition, classification with examples, synthesis of furan, thiophene, pyrrole, pyridine, indole (Fischer method) quinoline (Skrup's synthesis with mechanism), isoquinoline, pyrimidine (one method each), aromaticity and basicity of pyrrole and pyridine. Electrophillic substitution reactions of pyrrole and pyridine.

Uric acid: Elucidation of structure and synthesis by Fischer's method, conversion of uric acid to purine and caffeine

Alkaloids: Definition, classification based on heterocyclic rings-isolation, synthesis and structural elucidation of nicotine and morphine, physiological importance of alkaloids.

[8 Hours]

Vitamins: Definition, classification, structural elucidation and synthesis of Vit-A, Synthesis of Vit-C, structural formulae of Vit B_1, B_2, B_6, calciferol, E and K and their importance.

Hormones: Definition, classification, synthesis of adrenaline, thyroxine, structural formulae of estradiol, progesterone and testosterone and their importance.

Drugs: Chemotherapy and chemotherapeutic agents, definition of drugs, types of drugs, antipyretics, analgesics, anesthetics, sedatives, narcotics, antiseptics, antibacterials, antibiotics, antimalarials and sulpha drugs with examples. Synthesis of paracetamol, sulphanilamide, sulphaguanidine. **[9 Hours]**

UNIT III: Physical Chemistry

Spectrophotometry and photochemistry: Lambert – Beer's law – statement and mathematical form (to be derived). Molar extinction coefficient – definition – spectrophotometer – construction and working, its application.

Laws of photochemistry – Grotthus-Draper law of photochemical activation and Einstein's law of photochemical equivalence, quantum efficiency, reasons for low quantum yield (HBr formation as example) and high quantum yield (HCl formation as example), actinometry – Uranyl oxalate actinometer.

Photophysical processes: Definition with examples – photosensitization (eg. photosynthesis in plants), photo inhibition, fluorescence, phosphorescence, chemiluminescence and bioluminescence with examples. Determination of absorbed intensity – schematic diagram of apparatus used. Detectors – thermopile, photoelectric cell. **[7 Hours]**

Radiation Chemistry: Definition, primary and secondary stages in radiochemical reactions, ionic yield, energy yield, comparison with photochemistry, units of radiation – rad, gray and roentgen, Dosimeter – Fricke dosimeter, theories of radiolysis – Lind's and EHT theories. Radiolysis of water vapour, benzene and acetic acid. **[3 Hours]**

Molecular Spectroscopy: Regions of spectra, types of spectra, microwave spectra – rotational spectra of diatomic molecules, moment of inertia (expression to be derived). Expression for rotational energy, selection rule and transition equal spacing between rotational spectral lines (to be discussed), effect of isotopic substitution taking example of $^{12}C^{16}O$ and $^{13}C^{16}O$, calculation of bond length.

IR Spectra – vibrational spectra of diatomic molecules – force constant (no derivation), expression for vibrational energy, zero point energy, selection rule and transitions. Vibrational

modes of polyatomic molecules taking H_2O and CO_2 molecules as example. Applications of IR spectroscopy (mention).

Raman Spectra: Concept of polarizability, pure rotation, vibration (qualitative study) stoke's and antistoke's lines, selection rule, applications (mention)

Electronic Spectra: Potential energy curves for bonding and antibonding molecular orbitals, band theory, electronic transitions, qualitative description of non-bonding orbitals and transition between them. Selection rule and Franck Condon principle. **[10 Hours]**

V Semester Practicals

CHEMISTRY-DSE-2A LAB

Practical duration: 1 practical per week of 4 hrs

60 Hours (Credits: 02)

Gravimetric Estimations:

1. Gravimetric estimation of barium as barium sulphate.
2. Gravimetric estimation of iron as iron (III) oxide.
3. Gravimetric estimation of copper as copper (I) thiocyanate.
4. Gravimetric estimation of nickel as nickel dimethylglyoximate.
5. Gravimetric estimation of magnesium as magnesium -8-hydroxy oxinate.
6. Gravimetric estimation of sulphate as barium sulphate.
7. Gravimetric estimation of aluminum as aluminum oxide.
8. Gravimetric estimation of zinc as zinc oxide.

Ore analysis:

9. Preparation of standard potassium dichromate solution and estimation of iron in the given sample of hematite by dichromate method.
10. Estimation of percentage of calcium in limestone by oxalate method.
11. Estimation of manganese in the given sample of pyrolusite.
12. Estimation of magnesium in the given sample of dolomite by EDTA method.

Alloy Estimations:

13. Estimation of copper in bronze by iodometric method.
14. Estimation of tin in solder using EDTA.
15. Estimation of aluminium in Duralumin.

VI SEMESTER

CHEMISTRY –VI (DSE-2B)

CLASS DURATION – THEORY: 04 HOURS/WEEK

PRACTICALS: 04 HOURS/WEEK

Theory and Practicals: 60 Hours each-Total Credits-06 (Theory-04, Practicals-02)

Discipline Specific Elective (DSE-2B Chemistry) is a course for VI semester offered under the main Disciple/Subject of study or a Project/Dissertation, which should be compulsorily studied by a student as a core requirement of the programme

UNIT I: Inorganic Chemistry

Metallurgy:

Chief modes of occurrence of metals based on standard electrode potentials. Ellingham diagrams for reduction of metal oxides using carbon as reducing agent.

Pyrometallurgy: Extraction of Nickel from sulphide ore – general metallurgy followed by Mond's process (purification), manganese from oxide ores – reduction by the Aluminothermite process – refining by electrolytic process.

Hydrometallurgy: Extraction of gold from native ore by cyanide process and refining by quartation process.

Electrometallurgy: Extraction of lithium by fusion method followed by electrolysis of lithium chloride.

Powder metallurgy: Importance, and applications, production of tungsten powder. Principles of electroplating. **[10 Hours]**

Alloys:

Classification of alloys, ferrous and non-ferrous alloys, Specific properties of elements in alloys. Manufacture of Steel (removal of silicon decarbonization, demanganization,desulphurization dephosphorisation) and surface treatment (argon treatment, heat treatment, nitriding, carburizing). Composition and properties of different types of steels.

Production of ferro alloys; ferro chrome, ferro manganese. **[5 Hours]**

Bio-Inorganic Chemistry

A brief introduction to bio-inorganic chemistry. Essential and trace elements in biological . process. Role of metal ions present in biological systems with special reference to Na^+, K^+ and Ca^{2+}, Mg^{2+} ions: Na/K pump; Role of Mg^{2+} ions in energy production and chlorophyll. Role of Ca^{2+} ions in blood clotting. Enzymatic role of iron in haemoglobin and myoglobin, Mg in chlorophyll and cobalt in vitamin-B12. stabilization of protein structures and structural role (bones). Biological functions and toxicity of Cr, Mn, Co, Ni and I, Hg, Mo and Se.

[5 Hours]

UNIT II : Organic Chemistry

Special techniques in organic synthesis:

a) Polymer supported reagents – introduction, properties of polymer support-advantages of polymer support reagents, choice of polymers, types and applications.
b) Phase transfer catalysis – introduction, definition, types, preparation, mechanism and advantages.
c) Microwave induced organic synthesis – introduction, reaction vessel, reaction medium, advantages, limitations, precaution and applications.

d) Sonochemistry – use of ultra sound in organic synthesis, introduction, instrumentation, physical aspects, types and applications. **[6 Hours]**

Natural Pigments: Introduction to anthocyanines, structural formulae and their importance of anthocyanins, β-carotene and haemoglobin. **[2 Hours]**

Diazonium Compounds: preparation, mechanism of preparation and synthetic applications of benzene diazonium chloride. Conversion to phenol, halobenzene, phenyl hydrazine and coupling reaction. **[2 Hours]**

Hydroxy acids: Synthesis of lactic, citric and tartaric acids. One method each and their importance. Effect of heat on α, β, γ-hydroxy acids. **[3 Hours]**

Nucleic acids: Types, components, formation of nucleic acids, structure of DNA and RNA, importance of these in biological system. [**2 Hours]**

Identification of organic compounds by spectroscopic technique:

UV-visible spectroscopy: Introduction, chromophores and auxochrome, blue shift and red shift, graphical representation of spectra of 1,3-butadiene, benzene and lycopene. Influence of conjugation on UV absorption-comparison of UV spectra of acetone and methylvinyl ketone

IR-Spectroscopy: Introduction, stretching frequency of –OH (free and H-bonded), alkyl –C-H, C=C, C=C, C-C, C=O and C-O groups (by taking suitable examples). Graphical representation of IR spectra of benzoic acid and methyl benzoate

NMR Spectroscopy: Basic principles of proton magnetic resonance , nuclear magnetic spin quantum number I, influence of the magnetic field on the spin of nuclei, spin population, saturation using radio frequency, nuclear magnetic resonance-chemical shift (δ value), uses of TMS reference, nuclear shielding effects, equivalent and non-equivalent protons, spin-spin splitting and coupling.

Applications of NMR spectroscopy to simple organic molecules (like ethyl alcohol, ethane, propane, ethylene, methylamine, aniline, benzene, toluene, acetone, acetophenone, methyl cyanide and other simple molecules. **[5 Hours]**

UNIT III: Physical Chemistry

Electrochemistry

Electrolytic and electrochemical cells, electrode reaction of Daniel cell, single electrode potential, sign of electrode potential-convention (reduction potential to be adopted), convention of representing a cell, EMF and standard EMF of a cell, cell reaction, reversible and irreversible cells, Nernst equation (to be derived) and calculation of electrode potential, standard hydrogen gas electrode, reference electrodes-calomel and Ag-AgCl electrode-construction and working, electrochemical series and its significance, equilibrium constant and free energy of cell reaction, spontaneity of a cell reaction, concentration cells.

EMF of concentration cells: Definition with explanation – with transference and without transference, concentration cells – with examples. Liquid junction potential and salt bridge. (Numerical problems on Nernst equation and EMF calculations).

Application of EMF measurements: (a) Determination of pH of a solution using quinhydrone electrode and glass electrode (using dip type Calomel electrode) – Explanation with principle and procedure. (b) Potentiometric titration – principle, location of end points in - (1) Neutralization reactions [NaOH Vs HCl] (2) Oxidation-reduction reactions [$K_2Cr_2O_7$ Vs FAS] (3) Precipitation reaction [KCl Vs $AgNO_3$] and (4) Complexometric reactions ($ZnSO_4$ Vs $K_3[Fe(CN)_6]$) **[8 Hours]**

Phase equilibria: Gibb's phase rule – definition of the terms with examples, application to one component system (water and sulphur system), reduced phase rule – statement, reduced systems, two component system – simple eutectic type KI-water system, freezing mixtures, Pb-Ag system (desilverization of argentiferrous lead) **[5 Hours]**

Adsorption: Adsorption of gases on solids – factors which influence. Adsorption isotherms (definition) –Freundlich's and Langmuir's adsorption isotherms and BET equation (to be derived). Applications of adsorption. **[3 Hours]**

Kinetics of fast reactions and techniques:

Introduction, examples of fast reactions. Techniques – principle and procedure involved in - stopped flow method, flash photolysis, temperature jump method and pressure jump method.

[4 Hours]

VI Semester Practicals

CHEMISTRY-DSE-2B LAB

Practical duration: 1 practical per week of 4 hrs

60 Hours (Credits: 02)

Determination of solubility of sparingly soluble salt (like $BaSO_4$) by conductometric method.

1. Determination of K_a (dissociation constant of a weak acid) using digital conductometer.
2. Determination of rate constant of saponification of ethyl acetate by conductivity measurements.
3. Conductometric titration of strong acid x strong base and weak acid x strong base.

4. Determination of percentage composition of a given mixture containing two miscible liquids by Abbe's refractometer.
5. Potentiometric titration of ferrous ammonium sulphate against potassium dichromate.
6. pH titration of strong acid against strong base (by observing change in pH).
7. Potentiometric titration of mixture of HCl and CH_3COOH using NaOH solution.
8. Colorimeteric estimation of Fe^{3+} ion using ammonium thiocyanate as complexing agent.
9. Colorimeteric estimation of Cu^{2+} ion using NH_4OH as complexing agent.
10. Colorimeteric study of kinetics of oxidation of indigocarmine by chloramine-T.
11. Determination of pH of aerated drinks, fruit juices, shampoos and soaps.

Chromatography:

12. Paper chromatographic separation of Fe^{3+} and Ni^{2+} ions.
13. Paper chromatographic separation of Na^{+} and K^{+} ions.

Solvent extraction:

14. Separation of a mixture of Fe^{2+} and Ni^{2+} by complexation with DMG.

V SEMESTER

CHEMISTRY (SEC-1)

BASIC ANALYTICAL CHEMISTRY

CLASS DURATION – THEORY: 02 HOURS/WEEK

Theory: 30 Hours (Credits-02)

Skill Enhancement Course (Chemistry SEC-1) is a course for V semester course which may be chosen from a pool of the courses.

SEC:1 BASIC ANALYTICAL CHEMISTRY

Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Presentation of experimental data and results, from the point of view of significant figures.

Analysis of soil: Composition of soil, Concept of pH and pH measurement, Complexometric titrations, Chelation, Chelating agents, use of indicators.

a. Determination of pH of soil samples.

b. Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration. **10 hours**

Analysis of water: Definition of pure water, sources responsible for contaminating water, water sampling methods, water purification methods.

a. Determination of pH, acidity and alkalinity of a water sample.

b. Determination of dissolved oxygen (DO) of a water sample.

Analysis of food products: Nutritional value of foods, idea about food processing and food preservations and adulteration.

a. Identification of adulterants in some common food items like coffee powder, asafoetida, chilli powder, turmeric powder, coriander powder and pulses, etc.

b. Analysis of preservatives and colouring matter. **10 hours**

Chromatography: Definition, general introduction on principles of chromatography, paper chromatography, TLC etc.

a. Paper chromatographic separation of mixture of metal ion (Fe^{3+} and Al^{3+}).

b. To compare paint samples by TLC method.

Ion-exchange: Column, ion-exchange chromatography etc.

Determination of ion exchange capacity of anion / cation exchange resin (using batch procedure if use of column is not feasible). **10 hours**

Reference Books:

- Willard, H.H., Merritt, L.L., Dean, J. & Settoe, F.A. *Instrumental Methods of Analysis*. 7th Ed. Wadsworth Publishing Co. Ltd., Belmont, California, USA, 1988.
- Skoog, D.A. Holler F.J. & Nieman, T.A. *Principles of Instrumental Analysis*, Cengage Learning India Ed.

- Skoog, D.A.; West, D.M. & Holler, F.J. *Fundamentals of Analytical Chemistry 6th Ed.*, Saunders College Publishing, Fort Worth (1992).
- Harris, D. C. *Quantitative Chemical Analysis*, W. H. Freeman.
- Dean, J. A. *Analytical Chemistry Notebook*, McGraw Hill.
- Day, R. A. & Underwood, A. L. *Quantitative Analysis*, Prentice Hall of India.
- Freifelder, D. *Physical Biochemistry 2nd Ed.,* W.H. Freeman and Co., N.Y. USA (1982).
- Cooper, T.G. *The Tools of Biochemistry*, John Wiley and Sons, N.Y. USA. 16 (1977).
- Vogel, A. I. *Vogel's Qualitative Inorganic Analysis 7th Ed.*, Prentice Hall.
- Vogel, A. I. Vogel's *Quantitative Chemical Analysis 6th Ed.*, Prentice Hall.
- Robinson, J.W. *Undergraduate Instrumental Analysis 5th Ed.*, Marcel Dekker, Inc., New York (1995).

V SEMESTER

CHEMISTRY (SEC-2)

FUEL CHEMISTRY

CLASS DURATION – THEORY: 02 HOURS/WEEK

Theory: 30 Hours (Credits-02)

Skill Enhancement Course (Chemistry SEC-2) is a course for V semester course which may be chosen from a pool of the courses.

SEC:2 FUEL CHEMISTRY

Review of energy sources (renewable and non-renewable). Classification of fuels and their calorific value.

Coal: Uses of coal (fuel and nonfuel) in various industries, its composition, carbonization of coal. Coal gas, producer gas and water gas—composition and uses. Fractionation of coal tar, uses of coal tar bases chemicals, requisites of a good metallurgical coke, Coal gasification (Hydro gasification and Catalytic gasification), Coal liquefaction and Solvent Refining. **10 hours**

Petroleum and Petrochemical Industry: Composition of crude petroleum, Refining and different types of petroleum products and their applications.

Fractional Distillation (Principle and process), Cracking (Thermal and catalytic cracking), Reforming Petroleum and non-petroleum fuels (LPG, CNG, LNG, bio-gas, fuels derived from biomass), fuel from waste, synthetic fuels (gaseous and liquids), clean fuels.

Petrochemicals: Vinyl acetate, Propylene oxide, Isoprene, Butadiene, Toluene and its derivatives Xylene. **15 hours**

Lubricants: Classification of lubricants, lubricating oils (conducting and non-conducting) Solid and semisolid lubricants, synthetic lubricants.

Properties of lubricants (viscosity index, cloud point, pore point) and their determination.

05 hours

Reference Books:

- Stocchi, E. *Industrial Chemistry*, Vol-I, Ellis Horwood Ltd. UK (1990).
- Jain, P.C. & Jain, M. *Engineering Chemistry* Dhanpat Rai & Sons, Delhi.
- Sharma, B.K. & Gaur, H. *Industrial Chemistry,* Goel Publishing House, Meerut(1996).

VI SEMESTER

CHEMISTRY (SEC-3)

POLYMER CHEMISTRY

CLASS DURATION – THEORY: 02 HOURS/WEEK

Theory: 30 Hours (Credits-02)

Skill Enhancement Course (Chemistry SEC-3) is a course for VI semester course which may be chosen from a pool of the courses.

SEC:3 POLYMER CHEMISTRY

Kinetics of Polymerization:

Mechanism and kinetics of step growth, radical chain growth, ionic chain (both cationic and anionic) and coordination polymerizations, Mechanism and kinetics of copolymerization, polymerization techniques. **05 hours**

Crystallization and crystallinity:

Determination of crystalline melting point and degree of crystallinity, Morphology of crystalline polymers, Factors affecting crystalline melting point. **05 hours**

Polymer Solution – Criteria for polymer solubility, Solubility parameter, Thermodynamics of polymer solutions, entropy, enthalpy, and free energy change of mixing of polymers solutions, Flory- Huggins theory, Lower and Upper critical solution temperatures. **10 hours**

Properties of Polymers (Physical, thermal, Flow & Mechanical Properties).

Brief introduction to preparation, structure, properties and application of the following polymers: polyolefins, polystyrene and styrene copolymers, poly(vinyl chloride) and related polymers, poly(vinyl acetate) and related polymers, acrylic polymers, fluoro polymers, polyamides and related polymers. Phenol formaldehyde resins (Bakelite, Novalac), polyurethanes, silicone polymers, polydienes,

Polycarbonates, Conducting Polymers, [polyacetylene, polyaniline, poly (p-phenylene sulphide polypyrrole, polythiophene)]. **10 hours**

Reference Books:

- Seymour, R.B. & Carraher, C.E. *Polymer Chemistry: An Introduction,* Marcel Dekker, Inc. New York, 1981.
- Odian, G. *Principles of Polymerization*, 4th Ed. Wiley, 2004.
- Billmeyer, F.W. *Textbook of Polymer Science*, 2nd Ed. Wiley Interscience, 1971.

• Ghosh, P. *Polymer Science & Technology*, Tata McGraw-Hill Education, 1991.

• Lenz, R.W. *Organic Chemistry of Synthetic High Polymers.* Interscience Publishers, New York, 1967.

VI SEMESTER

CHEMISTRY (SEC-4)

CHEMICAL TECHNOLOGY, PESTICIDE CHEMISTRY & SOCIETY

CLASS DURATION – THEORY: 02 HOURS/WEEK

Theory: 30 Hours (Credits-02)

Skill Enhancement Course (Chemistry SEC-4) is a course for VI semester course which may be chosen from a pool of the courses.

CHEMICAL TECHNOLOGY, PESTICIDE CHEMISTRY & SOCIETY

Chemical Technology

Basic principles of distillation, solvent extraction, solid-liquid leaching and liquid-liquid extraction, separation by absorption and adsorption. An introduction into the scope of different types of equipment needed in chemical technology, including reactors, distillation columns, extruders, pumps, mills, emulgators. Scaling up operations in chemical industry. Introduction to clean technology. **10 hours**

Pesticide Chemistry

General introduction to pesticides (natural and synthetic), benefits and adverse effects, changing concepts of pesticides, structure activity relationship, synthesis and technical manufacture and uses of representative pesticides in the following classes: Organochlorines (DDT, Gammexene,); Organophosphates (Malathion, Parathion); Carbamates (Carbofuran and carbaryl); Quinones (Chloranil), Anilides (Alachlor and Butachlor). **10 hours**

Society

Exploration of societal and technological issues from a chemical perspective. Chemical and scientific literacy as a means to better understand topics like air and water (and the trace materials found in them that are referred to as pollutants); energy from natural sources (i.e. solar and renewable forms), from fossil fuels and from nuclear fission; materials like plastics and polymers and their natural analogues, proteins and nucleic acids, and molecular reactivity and interconversions from simple examples like combustion to complex instances like genetic engineering and the manufacture of drugs. **10 hours**

References:

- Reference Book: Cremlyn, R. Pesticides. Preparation and Modes of Action, John Wiley & Sons, New York, 1978.
- Harris, D. C. *Quantitative Chemical Analysis*, W. H. Freeman.

- Dean, J. A. *Analytical Chemistry Notebook*, McGraw Hill.
- Day, R. A. & Underwood, A. L. *Quantitative Analysis*, Prentice Hall of India.
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- Cooper, T.G. *The Tools of Biochemistry*, John Wiley and Sons, N.Y. USA. 16 (1977).
- John W. Hill, Terry W. McCreary & Doris K. Kolb, Chemistry for changing times 13th Ed.

Reference Books:

- Lee, J.D. *Concise Inorganic Chemistry* ELBS, 1991.
- Cotton, F.A., Wilkinson, G. & Gaus, P.L. *Basic Inorganic Chemistry*, 3rd ed., Wiley.

- Douglas, B.E., McDaniel, D.H. & Alexander, J.J. *Concepts and Models in Inorganic Chemistry*, John Wiley & Sons.
- Huheey, J.E., Keiter, E.A., Keiter, R.L. & Medhi, O.K. *Inorganic Chemistry: Principles of structure and Reactivity*, Pearson Education India, 2006.
- Graham Solomon, T.W., Fryhle, C.B. & Dnyder, S.A. *Organic Chemistry*, John Wiley & Sons (2014).
- McMurry, J.E. *Fundamentals of Organic Chemistry*, 7th Ed. Cengage Learning India Edition, 2013.
- Sykes, P. *A Guidebook to Mechanism in Organic Chemistry*, Orient Longman, New Delhi (1988).
- Eliel, E.L. *Stereochemistry of Carbon Compounds*, Tata McGraw Hill education, 2000.
- Finar, I.L. *Organic Chemistry* (Vol. I & II), E.L.B.S.
- Morrison, R.T. & Boyd, R.N. *Organic Chemistry*, Pearson, 2010.
- Bahl, A. & Bahl, B.S. *Advanced Organic Chemistry*, S. Chand, 2010.
- Barrow, G.M. *Physical Chemistry* Tata McGraw-Hill (2007).
- Castellan, G.W. *Physical Chemistry* 4th Ed. Narosa (2004).
- Kotz, J.C., Treichel, P.M. & Townsend, J.R. *General Chemistry* Cengage Learning India Pvt. Ltd., New Delhi (2009).
- Mahan, B.H. *University Chemistry* 3rd Ed. Narosa (1998).
- Petrucci, R.H. *General Chemistry* 5th Ed. Macmillan Publishing Co.: New York(1985).
- Nelson, D. L. & Cox, M. M. Lehninger¡¦s *Principles of Biochemistry*, 7th Ed., W. H.Freeman.
- Berg, J.M., Tymoczko, J.L. & Stryer, L. Biochemistry, W.H. Freeman, 2002.
- Shriver, D.F. & Atkins, P.W. *Inorganic Chemistry*, Oxford University Press.
- Wulfsberg, G. *Inorganic Chemistry*, Viva Books Pvt. Ltd.
- Rodgers, G.E. *Inorganic & Solid State Chemistry*, Cengage Learning India Ltd.,2008.
- Mark Weller and Fraser Armstrong, 5th Edition, Oxford University Press (2011-2012)
- Adam, D.M. *Inorganic Solids: An introduction to concepts in solid-state structural chemistry*. John Wiley & Sons, 1974.
- Poole, C.P. & Owens, F.J. *Introduction to Nanotechnology* John Wiley & Sons, 2003.
- E. Stocchi: *Industrial Chemistry*, Vol-I, Ellis Horwood Ltd. UK.
- R.M. Felder, R.W. Rousseau: *Elementary Principles of Chemical Processes*, Wiley

Publishers, New Delhi.

- J. A. Kent: *Riegel's Handbook of Industrial Chemistry, CBS Publishers, New Delhi.*
- *S. S. Dara: A Textbook of Engineering Chemistry*, S. Chand & Company Ltd. New Delhi.
- K. De, *Environmental Chemistry*: New Age International Pvt., Ltd, New Delhi.
- S. M. Khopkar, *Environmental Pollution Analysis*: Wiley Eastern Ltd, New Delhi
- S.E. Manahan, *Environmental Chemistry*, CRC Press (2005).
- G.T. Miller, *Environmental Science* 11th edition. Brooks/ Cole (2006).
- Mishra, *Environmental Studies*. Selective and Scientific Books, New Delhi (2005).
- E. Stocchi: *Industrial Chemistry*, Vol-I, Ellis Horwood Ltd. UK.
- W. D. Kingery, H. K. Bowen, D. R. Uhlmann: *Introduction to Ceramics*, Wiley Publishers, New Delhi.
- P. C. Jain & M. Jain: *Engineering Chemistry*, Dhanpat Rai & Sons, Delhi.
- R. Gopalan, D. Venkappayya, S. Nagarajan: *Engineering Chemistry*, Vikas Publications, New Delhi.
- K. Sharma: *Engineering Chemistry*, Goel Publishing House, Meerut Reference books:
- Skoog, D.A. Holler F.J. & Nieman, T.A. *Principles of Instrumental Analysis*, Cengage Learning India Ed.
- Willard, H.H., Merritt, L.L., Dean, J. & Settoe, F.A. *Instrumental Methods of Analysis*, 7th Ed. Wadsworth Publishing Company Ltd., Belmont, California, USA, 1988.
- P.W. Atkins: *Physical Chemistry.*
- G.W. Castellan: *Physical Chemistry.*
- Brian Smith: *Infrared Spectral Interpretations: A Systematic Approach.*
- W.J. Moore: *Physical Chemistry.*
- Banwell, C. N. & McCash, E. M. *Fundamentals of Molecular Spectroscopy* 4th Ed. Tata McGraw-Hill: New Delhi (2006).
- Chandra, A. K. *Introductory Quantum Chemistry* Tata McGraw-Hill (2001).
- House, J. E. *Fundamentals of Quantum Chemistry* 2nd Ed. Elsevier: USA (2004).
- Lowe, J. P. & Peterson, K. *Quantum Chemistry*, Academic Press (2005).
- Kakkar, R. *Atomic & Molecular Spectroscopy*: *Concepts & Applications*, Cambridge University Press (2015).

- K J Laidler. *Chemical kinetics.*
- J Rajaram and J C Kuriacose. *Kinetics and mechanism of chemical transformation.*
- Frost and Pearson. Chemical kinetics.
- Svehla, G. *Vogel's Qualitative Inorganic Analysis*, Pearson Education, 2012.
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- Ahluwalia, V.K. & Aggarwal, R. *Comprehensive Practical Organic Chemistry*, Universities Press.
- Garland, C. W.; Nibler, J. W. & Shoemaker, D. P. *Experiments in Physical Chemistry 8th Ed.;* McGraw-Hill: New York (2003).
- Halpern, A. M. & McBane, G. C. *Experimental Physical Chemistry 3rd Ed.;* W.H. Freeman & Co.: New York (2003).
- A.I. Vogel: *Qualitative Inorganic Analysis*, Prentice Hall, 7th Edn.
- A.I. Vogel: *Quantitative Chemical Analysis*, Prentice Hall, 6th Edn.
- P. L. Soni. *A Text book of Inorganic Chemistry*, Sultan Chand & Sons.
- B. R. Puri & L. Sharma. *A Text book of Inorganic Chemistry,* Shobhanlal Nagin Chand Co.
- Puri, Sharma & Kalia. *Principles of Inorganic Chemistry*, Shobhanlal Nagin Chand Co.
- Gurudeep Raj. *A Text book of Inorganic Chemistry.*
- Madan, Malik, Tuli. *Selected Topics in Inorganic Chemistry*, S. Chand & Company.
- A. K. De. *A Text book of Inorganic Chemistry*, New Age International.
- O. P. Agarwal. *Comprehensive Inorganic Chemistry.*
- Kapoor & Chopra. *Inorganic Chemistry.*
- B. K. Sharma. *Engineering Chemistry.*
- B. K. Sharma. *Industrial Chemistry.*
- Jain and Jain. *Engineering Chemistry.*
- R. Gopalan. *Elements of Nuclear Chemistry.*\
- B. N. Chakarbathy. *Industrial Chemistry.* Oxford & IBH Publishers.

- Gurdeep R. Chatwal & Sham Anand. *Instrumental methods of Chemical analysis*, Himalaya Publishing House.
- C. R. Chatwal. *Inorganic Polymers*, Himalaya Publishing House.
- Manku. *Theoretical Principles of Inorganic Chemistry,* Tata McGraw Hills.
- Gurudeep Raj. *Advanced Practical Inorganic Chemistry,* Goel Publishing House.
- C. N. R. Rao. *University Chemistry,* Mac Millan Company.
- Robinson & Heslop. A Text book of Inorganic Chemistry, New Age Publications.
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- Chattopadhyay. *Introduction to nanoscience & nanotechnology.*
- Dr. Shuthosh Sharma & Dr. Bellari. *Advances in nanoscience & nanotechnology.*
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- Bhal & Bhal. *A Text book of Organic Chemistry*, Chand & Company
- P. L. Soni. *A Text book of Organic Chemistry*, S. Chand & Company
- Raj K. Bansal. *Laboratory Manual of Organic Chemistry,* New Age Publications
- Jayaraman.S. *Laboratory Manual of Organic Chemistry*, Chand & Company.
- Aggarwal. *Chemistry of Natural products,* Goel Publishing House Meerut.
- K. K. Sharma. *Organic Chemistry*, Shobhanlal & Nagan Company.
- Puri & Sharma. *Organic Chemistry*, Shobhanlal & Nagan Company.
- Ashuthosh Kar. *Medicinal Chemistry,* Tata Mcgraw Hill Publications.
- Handrickson. *Organic Chemistry,* Tata Mcgraw Hill Publications
- V. K. Ahluwalia & Renu Aggarwal. *Organic Synthesis special techniques,* Narosa publishing House.
- Eliel. *Stereo Chemistry*, John Wiley Eastern Publications
- Raj K. Bansal. *Heterocyclic Chemistry,* Tata Mcgraw Hill Publications
- V. Kumar. *An introduction Green Chemistry.*
- R. P. Verma. *Physical Chemistry*, Pradeep Publication
- S. K. Jain. *Kinetics of Chemical Reactions*, Vishal publications, Jalandhar, New Delhi.
- M. Kundan & S. K. Jain. *Physical Chemistry.* S. Chand & Company
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- Jain & Jain. *Engineering Chemistry,* Dhanpal & Sons, New Delhi.
- W. Bansal. *Text book of Photochemistry,* S. Chand & Company
- Pathania & Sharma. *Physical Chemistry,* Vishal Publications Jalandhar & Delhi.

SCHEME OF VALUATION IN CHEMISTRY FOR THE

PRACTICAL EXAMINATION 2018-19

I SEMESTER

CHEMISTRY DSC-2A

C1: 5 marks, C2: 5 marks and C3: 20 marks = Max Marks: 30

Practical Duration: 3Hrs **Practical proper Marks: 20**

Note: Duly certified practical record shall be submitted at the time of practical examination.

PART- A:

C1 Practical Test: 05 marks

C2: RECORD: 03 MARKS and VIVA: 02 MARKS

C3: Final Practical Examination

VOLUMETRIC ESTIMATIONS-

PART- B: Marks: 20

a) Procedure writing : **03 Marks**

b) Preparation of standard solution and calculation of normality **Marks: 02+01 =03**

Titre values of standardization + Estimation **Marks: 06+06 =12**

Calculation **Marks: 1+1 =02**

SCHEME OF VALUATION IN CHEMISTRY FOR THE

PRACTICAL EXAMINATION 2018-19

II SEMESTER

CHEMISTRY DSC-2B

C1: 5 marks, C2: 5 marks and C3: 20 marks = Max Marks: 30

Practical Duration: 3Hrs **Practical Proper Marks: 20**

Note: Duly certified practical record shall be submitted at the time of practical examination.

PART- A:

C1 Practical Test: 05 marks

C2: RECORD: 03 MARKS and VIVA: 02 MARKS

C3: Final Practical Examination

PART- B: Marks: 20

a) Analysis of organic compounds: 16 Marks

b) Preparation of organic compounds: 04 Marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE

PRACTICAL EXAMINATION 2018-19

III SEMESTER

CHEMISTRY DSC-2C

C1: 5 marks, C2: 5 marks and C3: 20 marks = Max Marks: 30

Practical Duration: 3Hrs **Practical proper Marks: 20**

Note: Duly certified practical record shall be submitted at the time of practical examination.

PART- A:

C1 Practical Test: 05 marks

C2: RECORD: 03 MARKS and VIVA: 02 MARKS

C3: Final Practical Examination

PART- B: Marks: 20

a) Analysis of Inorganic salt mixture: 16 Marks

b) Preparation of Inorganic Complex: 04 Marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE

PRACTICAL EXAMINATION 2018-19

IV SEMESTER

CHEMISTRY DSC-2D

C1: 5 marks, C2: 5 marks and C3: 20 marks = Max Marks: 30

Practical Duration: 3Hrs **Practical proper Marks: 20**

Note: Duly certified practical record shall be submitted at the time of practical examination.

PART- A:

C1 Practical Test: 05 marks

C2: RECORD: 03 MARKS and VIVA: 02 MARKS

C3: Final Practical Examination

PART- B: Marks: 20

a) Physical Chemistry Experiments: Calculation, Graph, Experiment, Result: 16 Marks

b) Procedure writing for Organic Estimation Experiment: 04 Marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE

PRACTICAL EXAMINATION 2018-19

V SEMESTER

CHEMISTRY DSE-2A

C1: 5 marks, C2: 5 marks and C3: 20 marks = Max Marks: 30

Practical Duration: 3Hrs **Practical proper Marks: 20**

Note: Duly certified practical record shall be submitted at the time of practical examination.

PART- A:

C1 Practical Test: 05 marks

C2: RECORD: 03 MARKS and VIVA: 02 MARKS

C3: Final Practical Examination

PART- B: Marks: 20

a) Gravimetric Estimation: 16 Marks

b) Procedure writing for Ore/Alloy Estimation: 04 Marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE

PRACTICAL EXAMINATION 2018-19

VI SEMESTER

CHEMISTRY DSE-2B

C1: 5 marks, C2: 5 marks and C3: 20 marks = Max Marks: 30

Practical Duration: 3Hrs **Practical proper Marks: 20**

Note: Duly certified practical record shall be submitted at the time of practical examination.

PART- A:

C1 Practical Test: 05 marks

C2: RECORD: 03 MARKS and VIVA: 02 MARKS

C3: Final Practical Examination

PART- B: Marks: 20

a) Physical Chemistry Instrumental Experiments:

- Calculation, Graph, Experiment, Result: 16 Marks

b) Procedure writing for Chromatography and Solvent Extraction: 04 Marks

Chairman BOS in Chemistry

Subject: CHEMISTRY **Degree: B.Sc**

Semester	Course type	course	L	T	P	Total no Credits	Work hours per week
I	DSC-2A + Practicals	Inorganic Chemistry, Organic Chemistry, Physical Chemistry, General Chemistry	4	0	2	06	4+ 4
II	DSC-2A + Practicals	Inorganic Chemistry, Organic Chemistry, Physical Chemistry, General Chemistry	4	0	2	06	4+ 4
III	DSC-2A + Practicals	Inorganic Chemistry, Organic Chemistry, Physical Chemistry, General Chemistry	4	0	2	06	4+ 4
IV	DSC-2A + Practicals	Inorganic Chemistry, Organic Chemistry, Physical Chemistry, General Chemistry	4	0	2	06	4+ 4
V	DSE-2A + Practicals	Inorganic Chemistry, Organic Chemistry, Physical Chemistry	4	0	2	06	4+ 4
VI	DSE-2B + Practicals	Inorganic Chemistry, Organic Chemistry, Physical Chemistry	4	0	2	06	4+ 4
V	SEC-1	Basic Analytical Chemistry	2	0	0	02	2+ 0
V	SEC-2	Fuel Chemistry	2	0	0	02	2+ 0
VI	SEC-3	Polymer Chemistry	2	0	0	02	2+ 0
VI	SEC-4	Chemical Technology ,Pesticide Chemistry & Society	2	0	0	02	2+ 0

Total no. of Credits: **36 + 2+2 = 40**

Scheme of Examination for DSC and DSE

<table>
<tr><th>Credits

L:P</th><th colspan="3">Maximum marks in the C1, C2 and C3 components (I to VI)</th><th>Duration of examination</th></tr>
<tr><td rowspan="3">4: 2</td><td>C1

Marks</td><td>C2 Marks</td><td>C3 Marks</td><td>Theory: 3 hours</td></tr>
<tr><td>Theory:
10</td><td>Theory:
10</td><td>Theory:
80</td><td rowspan="2">Practical: 4 hours</td></tr>
<tr><td>Practicals:
10</td><td>Practicals:
10</td><td>Practicals:
80</td></tr>
</table>

C3 is the final examination marks

Scheme of Examination for SEC

<table>
<tr><th>Credits

L: P</th><th colspan="3">Maximum marks in the examination/ Assessment</th><th>Duration of examination</th></tr>
<tr><td rowspan="2">2:0</td><td>C1</td><td>C2</td><td>C3</td><td rowspan="2">3 hours</td></tr>
<tr><td>10</td><td>10</td><td>80</td></tr>
</table>

C3 is the final examination marks.

Examination and Evaluation for C3

The question paper pattern for C3 component is given below

Question paper pattern for DSC (Semester I to IV)

Duration : 3 hours **Max. Marks** : 80

The question paper contains 5 parts

Part-A (Compulsory)

Eight questions carrying 1 mark each 8 X 1 = 08

Part-B (Inorganic Chemistry)

Answer any 2 out of 3 questions 2 x 9 = 18

Part-C (Organic Chemistry)

Answer any 2 out of 3 questions 2 x 9 = 18

Part-D(Physical Chemistry)

Answer any 2 out of 3 questions 2 x 9 = 18

Part-E (General Chemistry)

Answer any 2 out of 3 questions 2 x 9 = 18

Pattern: (3 + 3+ 3) /(4 + 3 +3)

Question paper pattern for DSE (Semester V to VI)

Duration: 3 hours **Max. marks** : 80

The question paper contains 4 parts

Part-A (Compulsory)

Eight questions carrying 1 mark each 8 X 1 = 08

Part-B (Inorganic Chemistry)

Answer any 3 out of 4 questions 3 x 8 = 24

Part-C (Organic Chemistry)

Answer any 3out of 4 questions 3 x 8 = 24

Part-D(Physical Chemistry)

Answer any 3 out of 4 questions 3 x 8 = 24

Pattern: (5 + 3) /(3 + 3+ 2) / (2+ 2 + 4)

Question paper pattern for SEC (Semester V to VI)

Duration : 3 hours **Max. Marks** : 80

The question paper contains 2 parts

Part-A (Compulsory)

Eight questions carrying 1 mark each 8 X 1 = 08

Part-B

Answer any 9 out of 12 questions 9 x 8 = 72

Pattern:(4 + 2 + 2) / (4 + 4) / (3 + 3 + 2)

SCHEME OF VALUATION IN CHEMISTRY FOR THE PRACTICAL EXAMINATION 2018- 19

I SEMESTER

CHEMISTRY DSC-2A

C1 : 10 marks, C2: 10 marks and C3: 80 marks = Max marks : 100

Practical Duration : 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test : 10 marks

C2 : Record : 10 marks

C3 Final Practical examination

Volumetric Estimation:

Part-B marks : 80

a)	Procedure writing :		10 marks
b)	Preparation of Standard solution and Calculation of Normality		10 marks
c)	Titre values of Standardisation + Estimation	20 + 20	40marks
d)	Calculation		10 marks
e)	Viva		10 marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE PRACTICAL EXAMINATION 2018- 19

II SEMESTER

CHEMISTRY DSC-2B

C1 : 10 marks, C2: 10 marks and C3: 80 marks = Max marks : 100

Practical Duration : 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test : 10 marks

C2 : Record : 10 marks

C3 Final Practical examination

Volumetric Estimation:

Part-B marks : 80

a) Analysis of organic Compounds : 40 marks
b) Preparation of Organic compound 30 marks
c) Viva 10 marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE PRACTICAL EXAMINATION 2018- 19

III SEMESTER

CHEMISTRY DSC-2C

C1 : 10 marks, C2: 10 marks and C3: 80 marks = Max marks : 100

Practical Duration : 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test : 10 marks

C2 : Record : 10 marks

C3 Final Practical examination

Part-B Marks : 80

a) Analysis of Inorganic salts mixture : 40 marks
b) Preparation of Inorganic Complex 30 marks
c) Viva 10 marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE PRACTICAL EXAMINATION 2018- 19

IV SEMESTER

CHEMISTRY DSC-2D

C1: 10 marks, C2: 10 marks and C3: 80 marks = Max marks : 100

Practical Duration: 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test: 10 marks

C2: Record: 10 marks

C3 Final Practical examination

Part-B Marks: 80

a) Procedure writing for organic Estimation : 10 marks
b) Physical Chemistry experiment 60 marks
c) Viva 10 marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE PRACTICAL EXAMINATION 2018- 19

V SEMESTER

CHEMISTRY DSE-2A

C1 : 10 marks, C2: 10 marks and C3: 80 marks = Max marks : 100

Practical Duration : 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test : 10 marks

C2 : Record : 10 marks

C3 Final Practical examination

Volumetric Estimation:

Part-B Marks : 80

a) Procedure writing : 10 marks
b) Gravimetric estimation 60 marks
c) Viva 10 marks

SCHEME OF VALUATION IN CHEMISTRY FOR THE PRACTICAL EXAMINATION 2018- 19

VI SEMESTER

CHEMISTRY DSE-2B

C1 : 10 marks, C2: 10 marks and C3: 80 marks = Max marks : 100

Practical Duration : 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test : 10 marks

C2 : Record : 10 marks

C3 Final Practical examination

Volumetric Estimation:

Part-B marks : 80

a) Procedure writing : 10 marks
b) Physical Chemistry Instrumental experiments 60 marks
c) Viva 10 marks

Chairman
BOS in Chemistry

UNIVERSITY OF MYSORE

DEPRATMENT OF STUDIES IN CHEMISTRY

Scheme of Valuation in Chemistry for I Semester B.Sc. -C.B.C.S

2018-19

CHEMISTRY DSC- 2A

C1: 10 marks, C2: 10 marks and C3: 80 marks = Max marks: 100

Practical Duration: 3 Hours Practical Proper marks: 80

Note: Duly Certified practical record shall be submitted at the practical examination

Part-A

C1 Practical test : 10 marks

C2 : Record : 10 marks

C3 Final Practical examination

Part-B Marks : 80

Volumetric Estimation:

a) **Procedure writing** : 10 marks
[Principle : **-2** marks, Equation any one: - **2** marks
Procedure: 3 steps : **2 x 3** = 6 marks or 2 steps **3 x 2** = **6** marks]

b) Preparation of Standard solution and
Calculation of Normality (**7 + 2 + 1** marks) = 10 marks

c) Titre values of Standardisation + Estimation 20 + 20 = 40marks

Experimental Values:

Experimental values	Marks for Standardization	Marks for estimation
$\pm$0.2 cm^3	20	20
$\pm$0.3 cm^3	17	17
$\pm$0.4 cm^3	14	14
$\pm$0.5 cm^3	11	11
Any other value	8	8

d) **Calculation**:
(Normality of link solution, given solution and
wt/ dm^3 or 500cm^3 or 250 cm^3 (3 + 3 + 4 marks) 10marks

e) **VIVA**(5 questions pertained to practicals only) 10 marks

List of experiments to be given for procedure writing:

1. Estimation of NaOH and Na_2CO_3 in a mixture (or caustic soda) by double indicator method using approximately 0.1N HCl.
2. Estimation of ammonium chloride using 0.05N sodium hydroxide and 0.1N hydrochloric acid solutions (back titration).
3. Estimation of sulphuric acid and oxalic acid in a mixture using standard sodium hydroxide and standard potassium permanganate solutions.

4. Preparation of std. potassium dichromate solution and estimation of ferrous ammonium sulphate present in the solution using potassium ferrocyanide as an external indicator.
5. Estimation of ferrous and ferric iron in a given mixture using standard potassium dichromate solution.
6. Estimation of copper in $CuSO_4$ using potassium dichromate crystals and approximately 0.1N sodium thiosulphate solution.

List of Experiments to be given for examination:

1. Preparation of standard sodium carbonate solution and standardization of hydrochloric acid solution (methyl orange indicator). Estimation of sodium hydroxide present in the solution using phenolphthalein indicator.

2. Preparation of standard oxalic acid solution and standardization of sodium hydroxide solution. Estimation of sulphuric acid present in the solution.

3. Preparation of standard potassium biphthalate solution and standardization of sodium hydroxide solution. Estimation of oxalic acid present in the solution.

4. Preparation of standard oxalic acid solution and standardization of potassium permanganate solution. Estimation of ferrous ammonium sulphate present in the solution.

5. Preparation of standard oxalic acid solution and standardization of potassium permanganate solution. Estimation of hydrogen peroxide present in the solution.

6. Preparation of zinc sulphate solution and standardization of EDTA. Estimation of total hardness of water

Chairman
BOS in Chemistry

Telephone No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC6/32/2018-19

Dated: 15th June 2018

NOTIFICATION

Sub: Revision of Sociology (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

Ref: 1.Decision of the Board of Studies in Sociology (UG) held on 27-02-2018.
2. Decision of the Faculty of Arts Meeting held on 20-04- 2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.

*****

The Board of Studies in Sociology (UG) which met on 27th February 2018 has recommended to revise the Sociology (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

The Faculty of Arts and the Deans Committee held on 20-04-2018 and 22.05.2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The contents may be downloaded from the University Website i.e.,www.uni-mysore.ac.in

Deputy Registrar(Academic)

Draft Approved by the Registrar

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Arts, Department of Studies in English,Manasagangotri, Mysuru.
3. The Chairman, Department of Studies in Sociology, Manasagangothri, Mysuru.
4. The Chairman, Board of Studies in Sociology, (UG) Manasagangotri, Mysuru.
5. All the Principals of Affiliated/Constituent College running, Sociology, Graduate Programme.
6. The Director, College Development Council, MoulyaBhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB and EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysuru.
9. Office Copy.

UNIVERSITY OF MYSORE

DEPARTMENT OF STUDIES IN SOCIOLOGY, MANASAGANGOTRI, MYSORE

Proposed Syllabus of Sociology UG Programme with Effect from the Academic Year 2018-2019

(Start from First Semester Students of 2018-2019)

Subject : Sociology (UG)

Scheme : Choice Based Credit System (CBCS) and Continuous Assessment Grading Pattern (CAGP)

Duration : Three Years Six Semesters

Sociology UG Syllabus and Course Credit Structure

Semester	Title of the Paper	DSC/DSE/ GE	Number of Credits			
			L	T	P	Total
I	Introduction to Sociology	DSC	5	1	0	6
II	Foundation of Sociology	DSC	5	1	0	6
III	Study of Indian Society	DSC	5	1	0	6
IV	Pioneers of Sociology	DSC	5	1	0	6
V	Rural Society and Reconstruction - Paper - 1	DSE	5	1	0	6
	Population Studies in India - Paper – 2	DSE	5	1	0	6
	Medical Sociology - Paper - 3	DSE	5	1	0	6
	Gender Justice - Paper - 1	GE	1	1	0	2
VI	Contemporary Social Problems - Paper -1	DSE	5	1	0	6
	Sociology of Gender - Paper -2	DSE	5	1	0	6
	Research Methods in Sociology - Paper 3	DSE	5	1	0	6
	Sociology of Media - Paper - 1	GE	1	1	0	2

DSC : Discipline Specific Course

DSE : Discipline Specific Elective

GE : Generic Elective

L : Lecture

P : Practical

T : Tutorial

I Semester

INTRODUCTION TO SOCIOLOGY

(DSC - PAPER - 1) - 6 CREDITS

Unit 1: Origin and Development of Sociology

- Definition, Scope and Importance of Sociology
- Sociology as a Science
- Sociological Imagination (Charles Wright Mills)
- Sociological Perspectives - Empiricist, Humanistic and Empiricist cum Humanistic

Unit 2: Basic Concepts

- Meaning and Characteristics of Society, Community, Association, Institution, Social Groups, Social Systems, Social Structure, Functions and Social Stratification

Unit 3: Status and Role

- Ralph Linton's views on Status and Role, Types of Status
- Related concepts of Status – Station, Stratum, Status Set, Master Status
- Related concepts of Role – Role Conflict and Role Set
- Distinction between Status and Role

Unit 4: Culture

- Definition, Elements and Characteristics of Culture
- Comparison between Culture and Civilization
- Meaning of Acculturation – Robert Ezra Park's Idea of Melting Pot, Cultural Contact Culture Shock, Counter Culture and Contra Culture.
- Culture of Poverty - Oscar Lewis theory, Cultural Relativism, Ethnocentrism, Xenocentrism, Cultural Diffusion, Cultural Universal, George Peter Murdock's Classification, Cultural Innovation, Cultural Lag: Material and Non-material Culture.

Reference Books

- Berger, P. L. (1963). Invitation to sociology: A humanistic perspective. Garden City, N.Y: Doubleday.
- Bottommore. T.B (1992): Sociology: A Guide to Problems and Literature, Bombay, George Allen and Unwin India.
- Davis, Kingsley (1949). Human society. Oxford, Macmillan.
- Giddens, A. (2005) Sociology, 4th ed., Cambridge, Polity Press.
- Goode, W.J. (1977) Principles of Sociology. New York, McGraw Hill.
- Harlambos, M. 1998. Sociology: Themes and perspectives. New Delhi, Oxford University Press.
- Inkeles, Alex (1987): What is Sociology?, New Delhi, Prentice Hall of India.
- Jayaram. N (1989): Sociology-Methods and Theories, Bangalore, Macmillan India Ltd.
- Johnson, Harry M. 1995. Sociology: A systematic introduction. New Delhi, Allied Publishers.
- MacIver R.M. and Page C.H. (1974): Society: An Introductory Analysis. New Delhi, Macmillan and Company.
- ಭೈರಪ್ಪ ಕೆ., ಸಮಾಜಶಾಸ್ತ್ರ, ಕೆಂಬ್ರಿಡ್ಜ್ ಪಬ್ಲಿಷಿಂಗ್ ಕಂಪನಿ, ಬೆಂಗಳೂರು.
- ನಾರಾಯಣ, ಸಮಾಜಶಾಸ್ತ್ರದ ಪರಿಚಯ ಮತ್ತು ಬುನಾದಿಗಳು, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರಾಜಶೇಖರ್ ಎಸ್., ಸಮಾಜಶಾಸ್ತ್ರದ ಪ್ರವೇಶಿಕೆ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರಾಜಶೇಖರ್ ಎಸ್., ಸಮಾಜಶಾಸ್ತ್ರದ ಅಸ್ತಿಭಾರ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರಾಜು. ಈ., ಸಮಾಜಶಾಸ್ತ್ರ ಪರಿಚಯ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಂಕರ್‌ರಾವ್. ಸಿ.ಎನ್. ಸಮಾಜಶಾಸ್ತ್ರ ಸಂಪುಟ ೧ ಮತ್ತು ೨, ಜೈ ಭಾರತ್ ಪ್ರಕಾಶನ, ಮಂಗಳೂರು.

II Semester

FOUNDATION OF SOCIOLOGY

(DSC - PAPER - 2) - 6 CREDITS

Unit 1: Social Interaction

- Meaning of Social Interaction
- Social Processes: Meaning and Characteristics of Cooperation, Competition, Conflict, Accommodation and Assimilation.

Unit 2: Social Institutions

- **Marriage** – Definition, Characteristics and Functions
  Types of Marriage – Monogamy, Polygyny and Polyandry
- **Family** – Definition, Characteristics and Functions
- Types of Family – Matriarchal (Briffault's views), Patriarchal (Edvard Alexander Westermarck's views) Matrilineal, Patrilineal and Nuclear
- Changing Structure of Family - Living together, Single Parent Family and Same Sex Family
- **Religion** – Definition, Characteristics and Functions

Unit 3: Socialization and Social Control

- **Socialisation** - Definition, Aims and Stages
- Theories of Socialization: Charles Horton Cooley and George Herbert Mead
- Agencies of Socialization: Family, School, Peer Group and Mass Media
- **Social Control –** Definition and Objectives
- **Forms**: Informal Control - Customs, Folkways and Mores
  - Formal Control - Law and Education
- **Deviance** - Definition, Types and Factors facilitating Deviance
- **Conformity** - Definition and Causes

Unit 4: Social Change

- Definition and Features
- Concept of Evolution, Progress and Development
- Theories of Social Change - Cyclical and Conflict
- Factors of Social Change – Technology, Education and Law

Reference Books

- Coser, L. A. (1977) Masters of Sociological Thought: Ideas in historical and social context. New York, Harcourt Brace Jovanovich.
- Davis, Kingsley (1949). Human society. Oxford, England, Macmillan.
- Giddens, A. (2005) Sociology, 4th ed., Cambridge, Polity Press.
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- Johnson, Harry M. (1995) Sociology: A systematic introduction. New Delhi, Allied Publishers.
- MacIver R.M. and Page C.M. (1974) Society: An Introductory Analysis. New Delhi, Macmilan and Company.
- N. Jayaram (1990) Sociology of Education in India, Jaipure, Rawat Publications.
- Tumin, M. M. (1967). Social stratification. Englewood Cliffs, NJ: Prentice-Hall.
- William F. Ogburn and Meyer F. Nimkoff (1950). A Handbook of Sociology. London Routledge and Kegan Paul Ltd.
- ಭೈರಪ್ಪ ಕೆ., ಸಮಾಜಶಾಸ್ತ್ರ, ಕೆಂಬ್ರಿಡ್ಜ್ ಪಬ್ಲಿಷಿಂಗ್ ಕಂಪನಿ, ಬೆಂಗಳೂರು.
- ನಾರಾಯಣ, ಸಮಾಜಶಾಸ್ತ್ರದ ಪರಿಚಯ ಮತ್ತು ಬುನಾದಿಗಳು, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
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- ರಾಜಶೇಖರ್ ಎಸ್., ಸಮಾಜಶಾಸ್ತ್ರದ ಅಸ್ತಿಭಾರ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರಾಜು. ಈ., ಸಮಾಜಶಾಸ್ತ್ರ ಪರಿಚಯ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಂಕರ್‌ರಾವ್. ಸಿ.ಎನ್. ಸಮಾಜಶಾಸ್ತ್ರ ಸಂಪುಟ ೧ ಮತ್ತು ೨, ಜೈ ಭಾರತ್ ಪ್ರಕಾಶನ, ಮಂಗಳೂರು.

III Semester

STUDY OF INDIAN SOCIETY

(DSC - PAPER - 3) - 6 CREDITS

Unit 1: Pluralistic India

- India as Pluralistic Society - Emergence and Forces
- Unity in Diversity - Regional, Linguistic, Religions, Ethnic and Cultural
- **Marriage Patterns** - Marriage as a Sacrament and Civil Contract
- Recent Trends in Marriage
- **Family:** Joint Family and Nuclear Family and Changing Patterns
- Household Dimension of Family (A.M. Shah).

Unit 2: Caste as a farm of Social Stratification

- Stratification - Definition and Types – Slavery, Estate, Class and Caste Features of Caste System - G.S.Ghurye
- **Perspectives**
  a) M.N. Srinivas - Caste in Class, Class in Caste and Dominant Caste
- b) Andre Beteille - Caste and class
- **Untouchability**
  Perspectives – M.K.Gandhi and Dr. B.R.Ambedkar.

Unit 3: Marginalization and Social Exclusion (SC, ST, Minorities and Women)

- Definition of Marginalization and Social Exclusion
- Problems Faced due to Marginalization and Exclusion: Social - Economic and Religious Fields
- Issues of Integration and Autonomy of Tribal Community
- Constitutional Safeguards and Affirmative Action

Unit 4: Changing Indian Social Structure

- Sanskritisation - M.N. Srinivas
- Westernization - M.N. Srinivas
- Modernization – Daniel Lerner
- Globalization - Meaning & Agencies - Mass Media, IT and Global Economy
- Globalization and Indian Culture.

Reference Books

- Ahuja, Ram (1993) Indian Social System. Rawat Publications, Jaipur.
- Ambedkar, B.R. (1948) The Untouchable – Who are they and Why they Became Untouchable? New Delhi, Amrith Book Co.
- Beteille, Andre,(1965) Caste ,Class and Power, Berkeley, University of California Press. Charley, S.R. and G.K.Karanth eds (1998) Changing Untouchability, New Delhi, Sage
- Da, Veena (2004) Hand Book of Indian Sociology.
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- Dube, S.C. (1991) Indian Society. New Delhi, National Book Trust.
- Ghurye, G.S. (1957) Caste and Class in India. Bombay, Popular Book Depot.
- Ghurye, G.S. (1960) Caste and Race in India. Bombay, Popular Prakashan.
- Kapadia, K.M. (1990) Marriage and Family in India. New York, Oxford University.
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- Shah, A.M.(1973) The Household Dimension of Family in India. Delhi, Orient Longman.
- Singh, Yogendra (1984) Modernization of Indian Tradition. Jaipur, Rawat Publications.
- Sing, H.S.(1995) The Scheduled Tribes, New Delhi, Oxford University Press.
- Srinivas, M.N. (1992) Social Change in Modern India. Delhi, Orient Longman.
- Srinivas, M.N.(1962) Caste in Modern India and Other Essays. Bombay, Asia Publishing House.

- ಇಂದಿರಾ ಆರ್, ಭಾರತೀಯ ಸಮಾಜ, (1995) ಕನ್ನಡ ಪುಸ್ತಕ ಪ್ರಾಧಿಕಾರ, ಬೆಂಗಳೂರು.
- ನಂಜಮ್ಮಣಿ ಎಂ., ಭಾರತೀಯ ಸಾಮಾಜಿಕ ಸಂಸ್ಥೆಗಳು, ಪ್ರಸಾರಾಂಗ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು.
- ನಾರಾಯಣ ಗ್ರಾಮೀಣ ಸಮಾಜಶಾಸ್ತ್ರ ಮತ್ತು ಭಾರತೀಯ ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ನಾರಾಯಣ ಮತ್ತು ವಿಶ್ವ, ಭಾರತೀಯ ಸಮಾಜದ ಅಧ್ಯಯನ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರವೀಂದ್ರ ಕೊಪ್ಪರ್, ಭಾರತೀಯ ಸಮಾಜದ ಅಧ್ಯಯನ, ವಿಜಯ ಪ್ರಕಾಶನ, ಗದಗ್.
- ರಾಜಶೇಖರ್ ಎಸ್, ಭಾರತೀಯ ಸಮಾಜ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಂಕರ್‌ರಾವ್ ಎಸ್., ಭಾರತೀಯ ಸಮಾಜ, ಜೈ ಭಾರತ್ ಪ್ರಕಾಶನ, ಮಂಗಳೂರು.

IV Semester

PIONEERS OF SOCIOLOGY

(DSC PAPER - 4) - 6 CREDITS

Unit 1: Emergence of Sociology

- Intellectual Context and Enlightenment
- The Social, Economic and Political Forces
- The French and Industrial Revolutions

Unit 2: Founders

- **Auguste Comte**: Positivism - Law of three Stages - Classification of Sciences
- **Herbert Spencer**: Theory of Social Evolution - Types of Society

Unit 3: Karl Marx

- Dialectical Materialism - Economic Determinism - Class Struggle – Alienation
- **George Simmel** – Formal Sociology and Theory of Conflict

Unit 4: Emile Durkheim

- Rules of Sociological Methods, Social Facts, Division of Labour, Theory of Suicide

Max Weber

- Social Action - Ideal Types of Bureaucracy - Types of Authority - Protestant Ethics and Spirit of Capitalism

Reference Books

- Abraham, Francis (1984) Modern Sociological Theory. New Delhi, Orient Longman.
- Collins, Randall (1997) Sociological Theory. Jaipur, Rawat Publications
- Coser, Lewis (2002) Masters of Sociological Thought. Jaipur, Rawat Publications.
- Craib, Ian (1992) Modern Social Theory: From Parsons to Habermas. London, Harvester Press,
- Giddens, Anthony (1983) Sociology. Cambridge, Polity Press.
- Martindale, Don (1960) The Nature and Types of Sociological Theory. London, Routledge and Kegan Paul.
- Morrison, Ken (1995) Marx, Durkheim, Weber-Formation of Modern Social Thought. London, Sage Publications.
- Ritzer, George (2000) Sociological Theory. New York, McGraw Hill.
- Sorokin, Pitirim A. (1978) Contemporary Sociological Theories. New Delhi, Kalyani Publishers.
- Turner, Jonathan (1987) The Structure of Sociological Theory. Jaipur, Rawat Publications.
- Zetlin, I.M. (1998). Rethinking Sociology: A Critique of Contemporary Theory. Jaipur, Rawat Publications.
- ಭೈರಪ್ಪ ಕೆ. ಪ್ರಸ್ತುತ ಸಾಮಾಜಿಕ ಚಿಂತನೆ, ಸ್ವಪ್ನ ಬುಕ್ ಹೌಸ್, ಬೆಂಗಳೂರು.
- ಶಂಕರ್‌ರಾವ್ ಚ.ನ., ಸಾಮಾಜಿಕ ಚಿಂತನೆ, ಜೈಭಾರತ್ ಪ್ರಕಾಶನ, ಮಂಗಳೂರು.

V Semester

RURAL SOCIETY AND RECONSTRUCTION

(DSE PAPER - 1) - 6 CREDITS

Unit 1: Rural and Agrarian Social Structure

- Social Construction of Rural Societies - Myth and Reality (M.N. Srinivas)
- Types of Village

Agrarian Social Structure

- Land Tenure Systems (Colonial Period)
- Land Reforms (Post-independence India)
- Commercialization of Agriculture
- Commodification of Land

Unit 2: Themes of Rural Society in India

- Labour and Agrarian Class and Caste Structure
- Gender and Agrarian Realities
- Impact of Panchayat Raj System
- Impact of Politics on Rural India.

Unit 3: Markets - Historical Background

- Actors in Market - Weekly Fairs, Trading Castes, Emerging Trading Classes
- Key Role of Intermediaries
- Emergence of Virtual and Online Markets - Features, Impact on Traditional Sellers and Buyers

Unit 4: Rural Reconstruction and Transition

- a) **Induced Intervention** - MGNREGA – PURA - SHG - Yashaswini - Akshara Dasoha and Swach Bharath Abiyan
  b) **Forces of Change**
- Urbanization and Urban Influence
- LPG - GATT - WTO
- Effects of Globalization on Rural Society.

Reference Books

- Bose, Ashish (1978) Studies in Indian Urbanization 1901-1971. New Delhi and Bombay, Tata Mc Graw Hill.
- Choudhary,S.(1971) Peasants' and Workers' Movements; A Sociological Outline, New York, Random House.
- Choudhary,S.(1971) Peasants' and Workers' Movements; A Sociological Outline, New York, Random House.
- Desai, A.R. (1977) Rural Sociology in India Bombay, Popular Prakashan.
- Doshi, S.L.and Jain P.C. (1999) Rural Sociology. Jaipur, Rawat Publications.
- Jha, Avinash (2000) Background of Globalization, Mumbai, Centre for Education and Documentation
- Jogdand, P.G, P. Bansode and N.G.Meshram,eds (2008) Globalization and Social Justice, Jaipur, Rawat Publication
- Mehta, R.S. (1978) Rural Leadership and Panchayat. Chandighar, Bahri Publications.
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- Ramachandran, R. (1991) Urbanization and Urban Systems in India, New Delhi: Oxford University Press.
- Rao ,M.S.A. ed (1979) Social Movements in India, New Delhi, Macmillan.
- Sasen,Saskia and Kwame Anthony Appiah (1998) Globalization and its Discontents, New Delhi, Oxford University Press.
- Singh, Katar (2009) Rural Development: Principles, Policies and Management. New Delhi, Sage Publication Pvt. Ltd., India.

- Srinivas M N (1960) The Myth of Self Sufficiency of Indian Village, Economic Weekly, September 10, Pp. 1375-78 (Available on: http://www.epw.in/system/files/pdf/1960_12/37/the_myth_of_selfsufficiency_of_the_indian_village.pdf)
- Upadhya.C. and A.R.Vasavi, ed (2007) In an Outpost of the Global Economy; Work and Workers in India's Information Technology Industry, London, Routledge.
- ಬಡಿಗೇರ, ಜಿ.ಎಲ್. ಭಾರತದಲ್ಲಿ ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ, ಸಂಗಮೇಶ್ವರ ಪ್ರಕಾಶನ, ಸಂಕೇಶ್ವರ.
- ಭೈರಪ್ಪ ಕೆ., ಸಮಗ್ರ ಗ್ರಾಮೀಣ ಸಮಾಜ ಮತ್ತು ಅಭಿವೃದ್ಧಿ, ಸ್ವಪ್ನ ಬುಕ್ ಹೌಸ್, ಬೆಂಗಳೂರು.
- ನಾರಾಯಣ ಎಂ., ಗ್ರಾಮೀಣ ಸಮಾಜಶಾಸ್ತ್ರ ಮತ್ತು ಭಾರತೀಯ ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರವೀಂದ್ರ ಕೊಪ್ಪರ್, ಭಾರತೀಯ ಗ್ರಾಮೀಣ ಮತ್ತು ನಗರ ಸಮಾಜಶಾಸ್ತ್ರ, ವಿಜಯ ಪ್ರಕಾಶನ, ಗದಗ್.
- ರಾಜಶೇಖರ್ ಎಸ್., ಗ್ರಾಮೀಣ ಸಮಾಜಶಾಸ್ತ್ರ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಂಕರ್‌ರಾವ್ ಎನ್., ಗ್ರಾಮೀಣ ಸಮಾಜಶಾಸ್ತ್ರ, ಜೈ ಭಾರತ್ ಪ್ರಕಾಶನ, ಮಂಗಳೂರು.

V Semester

POPULATION STUDIES IN INDIA

(DSE - PAPER - 2) - 6 CREDITS

Unit 1: Population Studies

- Meaning and Scope
- Sociology and Demography
- Relevance of population studies

Sources of Population Data

- Census – Meaning, Characteristics, Stages and Importance
  Civil Registration – Meaning, Importance, Problems of Civil Registration in India
  Sample Surveys – Meaning, Current sample surveys conducted in India.

Unit 2: Structure of Population

- **Composition :** Age, Sex, Religion, Literacy and Occupation
  Components : Fertility - Factors influencing fertility,
  Mortality - Factors influencing mortality
  Infant mortality and maternal mortality rate in India and its causes.
  Migration - Meaning, types and causes

Unit 3: Theories of Population

- Malthusian - Optimum - Demographic and Transition Theory

Unit 4: Population Dynamics and Development

- Population as Constraints and Resources for Development – Food Supply, Employment and Housing
- Population Policies and Programmes in post-Independence India – Paradigm shift from Family Planning to Reproductive Health in India.
- Role of NGOs and Media

Reference Books

- Agarwal, S.N. (1989) Population Studies with Special Reference to India. New Delhi, Lok Surjeet Publication.
- Bhende, A. A., and Kanitkar, T. (1978) Principles of population studies. Bombay, Himalaya Pub. House.
- Bogue, D. J. (1969) Principles of demography. New York: Wiley.
- Bose, Ashish (1991) Demographic Diversity in India, Delhi: B.R.Publishing Corporation
- Census of India Report, GOI, New Delhi.
- Kingsley Davis. (1951) The Population of India and Pakistan. Princeton, N. J.: Princeton Univ. Press.
- Ram Ahuja. (1992) Social problems in India. Jaipur, Rawat Publications.
- ನಾರಾಯಣ ಮತ್ತು ವಿಶ್ವ, ಜನಸಂಖ್ಯಾ ಅಧ್ಯಯನ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರಾಜಶೇಖರ್ ಎಸ್., ಜನಸಂಖ್ಯಾಶಾಸ್ತ್ರ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಶಿಕುಮಾರ್, ಜನಸಂಖ್ಯಾ ಅಧ್ಯಯನ, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.

V Semester

MEDICAL SOCIOLOGY

(DSE - PAPER - 3) - 6 CREDITS

Unit 1: Medical Sociology

- Health: Goals and Definitions
- Related Terms: Sociology of Health and Sociology of Disease.
- Difference between Sociology of Medicine and Sociology in Medicine

Unit 2: Constructing Illness and Health

- **a) Construction of Illness** - Definitions of Illness, Sick and Disease
- Sick Role – Talcot Parsons
- Stigma of Mental Illness and HIV Positive

  b) Socio-cultural Determinants of Health
- Family, Gender, Housing, Sanitation, Environment, Nutrition and Cultural Practices

Unit 3: Healthcare and Systems:

- Hospital as a Social Institution
- Role of Nurses and other Paramedics
- Role of Pharmaceutical Industry and Advertisements
- Introduction of Healthcare Systems – Folk Medicine/Ethnomedicine, Ayurveda, Unani, Siddha, Yoga, Homeopathy and Allopathy

Unit 4: Health Care Delivery in India

- Health Policies, Mental Health Policies
- Overview of Health Programmes Related to Women, Children and the Disabled

Reference Books

- Albert, Gary L. and R. Fitzpatrick (1994).Quality of Life in Health Care: Advances in Medical Sociology, Mumbai: Jai Press.
- Annandale Allen (2001). The Sociology of Health and Medicine – A Critical Introduction, Cambridge: Polity Press.
- Bloom, Samuel W. (1963). The Doctor and His Patient, New York: Free Press.
- Chloe Bird, Peter Conrad and Alan Fremont eds. (2000). Handbook of Medical Sociology, New York: Prentice Hall.
- Cockerham, William C. (1997). Medical Sociology, New Jersey: Prentice Hall
- Coe, Rodney M. (1970). Sociology of Medicine, New York: McGraw Hill.
- Conrad, Peter ed. (2005). Sociology of Health and Illness: Critical Perspectives, New York: Worth Publishing.
- Dutta, P.R. (1955). Rural Health and Medical Care in India, Ambala: Army Education Press.
- Madan, T.N. (1980). Doctors and Nurses, New Delhi: Vikas.
- Ommen, T. K. (1978). Doctors and Nurses: A Study in Occupational Role Structures, Bombay: Macmillan.
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- Venkataratnam, R (1979). Medical Sociology in an Indian Setting, Madras: Macmillan.
- ಭೈರಪ್ಪ ಕೆ., ವೈದ್ಯಕೀಯ ಸಮಾಜಶಾಸ್ತ್ರ, ಸ್ವಪ್ನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಗೋಪಾಲ್‌ರಾಜ್ ಆರ್., ವೈದ್ಯಕೀಯ ಸಮಾಜಶಾಸ್ತ್ರ.

V Semester

GENDER JUSTICE

(GE - PAPER - 1) - 2 CREDITS

Unit 1: Social Construction of Gender

- Sex and Gender, Gender Discrimination, Gender Sensitivity, Empowerment

Unit 2: Gender Violence

- Domestic Violence, Harassment at Work Place, Dowry, Dishonour Killing

Unit 3: Gender Representation

- Mass Media and Politics
- Education, Employment and Health

Unit 4: Addressing Gender Justice -

- 74th Constitutional Amendment and Women's Political Empowerment
- SHGs

Reference Books

- Altekar, A.S. (1983).***The Position of Women in Hindu Civilization***, Delhi: Motilal Banarasidas.
- Channa, Karuna ed. (1988).***Socialization, Education and Women***, New Delhi: Orient Longman.
- Chaudhuri, Maitrayee ed. (2004).***Feminism in India,*** New Delhi: Kali for Women and Women Unlimited.
- Desai, Neera and Maithreyi Krishnaraj (1987).***Women and Society in India***, Delhi: Ajanta.
- Dube, Leela, Eleanor Leacock and Shirley Ardner (1986).***Visibility and Power: Essays on Women in Society and Development***, New Delhi: Oxford University Press.
- Forbes, Geraldine (1998).***Women in Modern India***, New Delhi: Cambridge University Press.
- Gandhi, Nandita and N.Shah (1992).***Issues at Stake: Theory and Practice in the Contemporary Women's Movement in India,*** New Delhi: Kali for Women
- Geetha, V. (2002).***Gender***. Calcutta: Stree.

VI Semester

CONTEMPORARY SOCIAL PROBLEMS

(DSE PAPER – 1) - 6 CREDITS

Unit 1: Social problems

- Introduction - Meaning and Nature
- Approaches to the Study of Social Problems - Social Disorganization, Personal, Deviational and Anomie Approach

Unit 2: Family Disorganization

- Meaning - Causes, Consequences and Remedial measures
- **Problems of Aged** - Meaning and Nature of the Problems of Aged
- Changing Role of the Aged in the Family and Community
- Care and Welfare of the Aged

Unit 3: Crime and Delinquency

- **Crime**: Meaning - Causes
- Theories of Punishment - Preventive and Reformative measures
- **Juvenile Delinquency** - Meaning - Causes and Rehabilitative measures

Unit 4: a) Alcoholism and Drug Addiction

- Meaning - Causes - Consequences and measures

b) Corruption and Terrorism

- **Corruption**: Meaning - Types - Causes and Consequences
- Prevention of Corruption Act and its effectiveness
- **Terrorism** – Meaning - Causes - Types - Consequences and Remedial Measures.

Reference Books

- Ahuja, Ram (2000). Criminology. Jaipur, Rawat Publications
- Ahuja, Ram (2000): Social Problems in India. New Delhi, Rawat Publications.
- Beteille, Andre (1992): Backward Classes in Contemporary India, New Delhi
- Bharatada Prachalita Samajika Samasyegalu D.K. Shivanna
- Desai, Neera and Usha Thakkar (2007): Women in Indian Society. New Delhi, National Book Trust, India.
- Dube, Leela (1997): Women and Kinship, Comparative Perspectives on Gender in South and Southeast Asia. New Delhi, Sage Publication.
- Gadgil, Madhav and Ramchandra Guha (1996): Ecology and Equality: The use and Abuse of Nature in Contemporary India, New Delhi.
- Gill, S.S. (1998): The Pathology of Corruption. New Delhi, Harper Collin Publishers.
- Madan.G.R. (1990): Indian Social Problems. Vol.I, Delhi, Allied Publication.
- Murty, T.V. (1996): Region, Religion, Caste, Gender and Culture in Contemporary India. New Delhi.
- ಭೈರಪ್ಪ ಕೆ. ಪ್ರಸ್ತುತ ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆಗಳು, ಕೆಂಬ್ರಿಡ್ಜ್ ಪಬ್ಲಿಷಿಂಗ್ ಕಂಪನಿ, ಬೆಂಗಳೂರು.
- ಮಾಳಿ ಹೆಚ್.ಬಿ. ಭಾರತದ ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆಗಳು, ಭಾರತ ಪ್ರಕಾಶನ, ಧಾರವಾಡ್.
- ನಾರಾಯಣ ಎಂ. – ವಿಶ್ವ, ಸಮಾಜಿಕ ವಿಘಟನೆ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ರಾಜಶೇಖರ್ ಎಸ್., ಪ್ರಚಲಿತ ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆಗಳು, ಮೈಸೂರು ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಸುಬ್ರಮಣ್ಯ ಜ., ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆಗಳು, ಸ್ವಪ್ನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಂಕರ್‌ರಾವ್ ಎನ್., ಗ್ರಾಮೀಣ ಭಾರತದ ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆಗಳು, ಜೈಭಾರತ್ ಪ್ರಕಾಶನ, ಮಂಗಳೂರು.

VI Semester

SOCIOLOGY OF GENDER

(DSE - PAPER – 2) - 6 CREDITS

Unit 1: Basic Concepts

Sociology of Gender - Meaning

- Relevance of studying women in society

Social Construction of Gender - Gender and Sex, Patriarchy, Feminism,

Gender Equality, Gender Justice and Empowerment

Unit 2: Gender Inequality

- Family - Marriage - Education - Economy - Mass Media - Health and Political Institutions

Unit 3: Violence against Women

- Feticide - Infanticide - Dowry - Dishonour Killings - Rape - Acid Attack - Domestic Violence and Sexual Harassment
- Related Legislations

Unit 5: Women and development

- Emergence of Women's Groups
- Challenges before Women's Movement
- Policies and Programmes - Central and State (Karnataka)
- Reservation for Women in Political Institutions

Reference Books

- Deborah L. Rhode (1990) Theoretical Perspectives on Sexual Difference. New Haven, Conn.: Yale University Press.
- Desai, Neera and M. Krishnaraj. 1987. Women and Society in India. Delhi: Ajanta.
- Indira R, Behera DK (eds) Gender and society in India, vol 2. New Delhi, Manak Publications.
- Krishna Raj, Maithreyi (Ed) (1986) Women's Studies in India. Some Perspectives, Bombay: Popular Prakashan.
- Sathyamurthy, T. V. (1996). Region, religion, caste, gender and culture in contemporary India. Delhi: Oxford university press.
- ಇಂದಿರಾ ಆರ್. ಮಹಿಳೆ, ಸಮಾಜ ಮತ್ತು ಸಂಸ್ಕೃತಿ, (2002) ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಹಂಪಿ.
- ಇಂದಿರಾ ಆರ್. ಮಹಿಳೆ ಮತ್ತು ಕೌಟುಂಬಿಕ ಹಿಂಸೆ, (2000) ಯಶೋದ ರ.ಗೌ. ಟ್ರಸ್ಟ್, ಮೈಸೂರು.
- ದಾದಾಪೀರ್ ಕೆ., ಹೆಣ್ಣುಮಕ್ಕಳನ್ನು ಕೌಟುಂಬಿಕ ಹಿಂಸೆಯಿಂದ ಸಂರಕ್ಷಿಸುವ ಕಾಯ್ದೆ 2005.
- ಗೀತಾ ಕೃಷ್ಣಮೂರ್ತಿ, ಮಹಿಳೆ ಮತ್ತು ಕಾನೂನು, ನವಕರ್ನಾಟಕ ಪ್ರಕಾಶನ.
- ನಟರಾಜ್ ಎಂ.ಆರ್., ಕೌಟುಂಬಿಕ ದೌರ್ಜನ್ಯದಿಂದ ಮಹಿಳೆಯರ ಸುರಕ್ಷತೆ ಕಾಯಿದೆ ಮತ್ತು ನಿಯಮಗಳು, ವೀನವೀ ಪ್ರಕಾಶನ, ಬೆಂಗಳೂರು.
- ಓಂಕಾರ್ ವಿ.ಆರ್., ಭಾರತೀಯ ಉತ್ತರಾಧಿಕಾರ ಅಧಿನಿಯಮ, ಆಕಳವಾಡಿ ಬುಕ್ ಡಿಪೋ, ಧಾರವಾಡ.

VI Semester

RESEARCH METHODS IN SOCIOLOGY

(DSE PAPER – 3) - 6 CREDITS

Unit 1: Social Research

- Social Sciences and Natural Sciences
- Social Problems Vs Research Problems
- Stages of Social Research
- Uses of Social Research
- Ethics in Social Research

Unit 2: Basic Research Concepts

- Data - Research Techniques - Concepts and Indicators - Variables - Constants - Hypothesis – Assumption
- Research Design: Explorative - Descriptive and Experimental

Unit 3: Tools of Data Collection

- Sampling
- Observation
- Questionnaire
- Interview
- Case Study
- Documents and Records

Unit 4: Analyzing Data

- **a) Editing and Coding**
- Quantitative and Qualitative
- Content Analysis
- Life History
- Report Writing

b) Statistical Methods

- Types of Statistics: Deductive and Inductive Statistics,
- Statistical Analysis: Classification - Tabulation - Diagrammatical and Graphic Presentation
- Measures of Central Tendency: Mean, Median and Mode
- Measures of Dispersion: Standard Deviation and Quartile Deviation

Reference Books

- Bose, Pradip Kumar (1995). Research Methodology, New Delhi: ICSSR.
- Bryman, Alan (2001). Social Research Methods, New York: Oxford University Press.
- Carol Grbich (2000).New Approaches in Social Research, London: Sage Publications.
- D. A. DE VAUS (1986). Surveys in Social Research, London & Winchester, MA: George Allen & Unwin.
- Dooley, David (1997). Social Research Methods, New Delhi: Prentice Hall of India.
- Goode and Hatt (1952). Methods in Social Research, New York: McGraw Hill.
- Sadhu, A.N. and Amarjit Singh (1980). Research Methodology in Social Sciences, Bombay: Himalaya Publishing House.
- Yayes, Simeon (2004). Doing Social Science Research, London: Sage Publications.
- Young Pauline V. (1992). Scientific Social Surveys and Research, New Delhi: Prentice Hall of India.
- ಇಂದಿರಾ ಆರ್. ಸಾಮಾಜಿಕ ಸಂಶೋಧನ ವಿಧಾನಗಳು, (1976) ವಿದ್ಯಾಸಾಗರ್ ಪ್ರಿಂಟಿಂಗ್ ಅಂಡ್ ಪಬ್ಲಿಷಿಂಗ್ ಹೌಸ್, ಮೈಸೂರು.
- ನಾರಾಯಣ ಎಂ., ಸಾಮಾಜಿಕ ಸಂಶೋಧನಾ ವಿಧಾನ, ಚೇತನ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು.
- ಶಂಕರ್‌ರಾವ್ ಚ.ನ., ಸಾಮಾಜಿಕ ಸಂಶೋಧನಾ ಕೈಪಿಡಿ,
- ರಾಜಶೇಖರ ಎಸ್. ಸಾಮಾಜಿಕ ಸಂಶೋಧನೆ.

VI Semester

SOCIOLOGY OF MEDIA

(GE PAPER - 1) - 2 CREDITS

Unit 1: Social History of Media – State, Civil Society and Media in India, Knowledge Society

Unit 2: Mass Media – Print, Electronic and New Media

Unit 3: The use and Abuse of Media – Development Issues – Media, Crime and Violence

Unit 4: Impact of Media on Society – Women, Youth, Consumerism and Globalization

Reading List:

- Abbas, Ackbar and John Nguyet Erni (2005).***Internationalizing Cultural Studies: An Anthology***, London: Blackwell.
- Asa Briggs & Burke (2005). ***A Social History of the Media***, Cambridge: Polity Press.
- Ash Amin and Nigel Thrift eds. (2004).***Cultural Economy Reader***, London: Blackwell.
- Don Robotham (2005). ***Culture, Society and Economy: Bringing Production Back In,*** London: Sage Publications.
- Dwyer, Rachel (2010). ***Bollywood's India: Hindi Cinema as a Guide to Modern India,*** New Delhi: Oxford University Press.
- Dwyer, Rachel and C.Pinney ed. (2001). ***Pleasure and the Nation: The History of Consumption and Politics of Public Culture in India***, New Delhi: Oxford University Press.
- Elizabeth Long ed. (1997). ***From Sociology to Cultural Studies***, London: Blackwell.
- Gray, Ann (2005). ***Research Practice for Cultural Studies***, London: Sage
- Ingles, David (2005). ***Culture and Everyday Life***, *London*: Routledge
- Jan van Dijk (2006). ***The Network Society***, London: Sage Publications.
- Nandy, Ashis (1995). ***The Secret Politics of Our Desires***, New Delhi: Oxford University Press
- Niranjana, Tejaswini, P. Sudhir and Vivek Dhareshwar ed. (1995). ***Interrogating Modernity: Culture and Colonialism in India***, Calcutta: Seagull.
- Rajgopal, Arvind (2001). ***Politics after Television: Hindu Nationalism and the Reshaping of Public in India***, Cambridge: Cambridge University Press.
- Stuart Hall ed. (1997). ***Cultural Representation and Signifying Practices***, London: Sage.

Annexure II

Question Paper Pattern for DSC and DSE

B.A. Examination Month/Year

(Scheme CBCS)

Sociology

Title of the Paper

Time: 3 hours Max. Marks: 80

Instruction: Answer All Questions

I. Answer All Questions **4 x 5 = 20**

1.
2.
3.
4.

II. Answer Any Three Questions **3 x 10 = 30**

5.
6.
7.
8.
9.

III. Answer the Following Questions **2 x 15 = 30**

10. ……..
or
……
11. ……
or
……

Annexure II

Question Paper Pattern for GE
B.A. Examination Month/Year
(Scheme CBCS)
Sociology
Title of the Paper

Time: 2 hours Max. Marks 40

Instruction: Answer All Questions

I. Answer Any Four Questions **4 x 5 = 20**

1.
2.
3.
4.
5.
6.

II. Answer All The Questions **2 x 10 = 20**

7. ……..

or

……

8. ……..

or

……

Telephone No. 2419677/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC6/32/2018-19 Dated: 15th June 2018

NOTIFICATION

Sub: Revision of History (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

Ref: 1.Decision of the Board of Studies in History (UG) held on 27-02-2018.
2. Decision of the Faculty of Arts Meeting held on 20-04- 2018.
3. Decision of the Deans committee Meeting held on 22.05.2018.

*****

The Board of Studies in History (UG) which met on 27th February 2018 has recommended to revise the History (UG) Syllabus and Scheme of Examination as per CBCS Pattern from the academic year 2018-19.

The Faculty of Arts and the Deans Committee held on 20-04-2018 and 22.05.2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The contents may be downloaded from the University Website i.e., www.uni-mysore.ac.in

Deputy Registrar(Academic)

Draft Approved by the Registrar

To:

1. The Registrar (Evaluation), University of Mysore, Mysuru.
2. The Dean, Faculty of Arts, Department of Studies in English,Manasagangotri, Mysuru.
3. The Chairman, Department of Studies in History, Manasagangothri, Mysuru.
4. The Chairman, Board of Studies in History, (UG) Manasagangotri, Mysuru.
5. All the Principals of Affiliated/Constituent College running, History, Graduate Programme.
6. The Director, College Development Council, MoulyaBhavan, Manasagangotri, Mysuru.
7. The Deputy Registrar/Assistant Registrar/Superintendent, AB and EB, University of Mysore, Mysuru.
8. The PA to Vice-Chancellor/Registrar/Registrar (Evaluation), University of Mysore, Mysuru.
9. Office Copy.

ANNEXURE-2 COURSE CREDIT STRUCTURE
B.A. PROGRAMME
DSC- DISCIPLINE SPECIFIC COURSE

Sem	Course	Title of the Paper	L-T-P	Total Credit
I	DSC-1 A	History of India. up to 1206 A.D.	5-1-0	6
II	DSC-1 B	History of India. (1206 to 1761 A.D)	5-1-0	6
III	DSC-1 C	History of Modern India (1757 to 1858 A.D.)	5-1-0	6
IV	DSC-1 D	Indian National Movement (1885 to 1947 A.D)	5-1-0	6

DSE- DISCIPLINE SPECIFIC ELECTIVE (SOFT CORE)

Sem	Course	Title of the Paper	L-T-P	Total Credit
V	DSE 1 A	State and Society in South India (1336 to 1800 A.D.)	5-1-0	6
	DSE 2 A	Colonialism and Nationalism in Asia (1800 to 1950 A.D)	5-1-0	6
	DSE 3 A	History and Culture of South India. up to A.D. **OR**: Principles Of Tourism	5-1-0	6
VI	DSE 1 B	History of Modern Europe (1789 to 1945 A.D.)	5-1-0	6
	DSE 2 B	India and Contemporary World (1950 to 1995 A.D.)	5-1-0	6
	DSE 3 B	History of Modern Karnataka (1800 to 1956 A.D) **OR** Tourism Development and Organization	5-1-0	6

GE- Generic Elective (Open Elective)

Sem	Course	Title of the Paper	L-T-P	Total Credit
V	GE 1	History of Modern India (1757 to 1858 A.D.)	1-1-0	2
VI	GE 2	Indian National Movement (1885 to 1947 A.D)	1-1-0	2

I semester B.A History Syllabus

DSC – 1A (core) Credit – 6 (5+1+0)

Title of the Paper :- History of India. up to 1206 A.D

UNIT – I : Sources – Literary and Archaeological – Geographical Factors – Harappa Culture- Cities (Harappa , Mohenjodaro, Lothal, Chanudaro) Polity, Economy, Religious - The Aryans- Origin-Rigvedic and Later Vedic Period- Political - Economic - Social and Religious Condition.

UNIT- II : The 6th Century of Indian History –Causes for rise of new Religion – Jainism –Life and teachings of Mahavira –Buddhism- Life and teachings of Buddha.

UNIT –III Rise of Magadha – Historical Background -Mauryas –Chandragupta Maurya, Ashoka; Kalinga war, Welfare State concept –Ashoka Dharma - Causes for decline of Mauryas. The Indo-Greeks-Menander-Kushans-Kanishka-Conquests, Contributions to Budhism –Gandara Art.

UNIT–IV: Guptas –Samudragupta –Chandragupta Vikramadithya-Development of Language, Literature and Science –Art and Architecture-revival of Hinduism - Vardanas-Life and achievements of Harshavardana

UNIT –V Rajputs –Origin-Polity –Prithviraj Chauhan, Cultural contributions of Rajputs.

MAPS FOR STUDY

1. Mauryan Empire under Ashoka
2. Kushana Empire under Kanishka
3. Gupta Empire under Samudragupta
4. Vardana Empire under Harshavardana

Historical Places

1 . Harappa	8 Nalanda	15. Thaneshwar
2. Mohenjodaro	9 Pataliputra	16. Konark
3. Lothal	10. Saranatha	17 Khajurao
4. Kalibangan	11 Maski	18 Ajmir
5. Chanhudaro	12 Jatinga Rameshwara	19 Takshaila

6. Lumbini 13 Purushapura 20 Kanuj
7. Gaya 14. Ujjaini

BOOKS FOR STUDY AND REFERENCE

01 Romila Thapar - History of India Vol I

02 R.C. Majumdar - History of India Vol I

03 B.N. Lunia - Evolution of Indian culture

04 D.N. Jha - Ancient India –An Introductory

05 Ray Choudary - History of Ancient India

06 Altekar A.S - State and Government in Ancient India

07 Santhosh Kumar Das - The Economic History of Ancient India

08 R.S. Sharma - Indian Feudalism

09 R.S. Sharma - Material Culture and Social formation in Ancient India.

10 Allchin B. - The Rise and Fall of Indian Civilization

11 Bashyam. A.L. - The Wonder that was India, Vol I

12 Lal B.B. and Gupta S.P. - (ed) Frontiers of the Indus Civilization

13 Wheeler M - The Indus Civilization

Dr Savitha kumara D.M - Ancient india

Dr Pramiladevi - Ancient History People their culture

II semester B.A History Syllabus

DSC – 1 B (core) Credit – 6 (5+1+0)

Title of the Paper :- History of India. (1206 to 1761 A.D)

UNIT – I :Sources – Literary Sources –Foundation of Delhi Sultanate –Qutabuddin Aibak , Iltumish –Raziya Sultan –Ghiyasuddin Balban-Alauddin Khilji-Conquests-Administrative reforms –Administrative measures of Muhammad –bin –Tughaluq.

UNIT-II : Advent of Babur-Foundation of Mughals-Shershah Sur-Life and achievements –Akbar-Conquests-Administration-Religious Policy-Aurangazeb-Religious Policy and Deccan Policy.

UNIT – III : Social and Economic conditions under Mughals –Art and architecture.

UNIT –IV : Rise of Monothestic religions – Kabir –Gurunanak-Sufism-Shaikh Nizamuddin Owliya-Shaikh Moin-ud-din Chesti.

UNIT : V : The Saints of Maharastra – Namadeva- -Ekanath-Tukaram- Shivaji's Career and achievements- Administration . The Peshwas-Balaji Vishwanatha-Bajirao I –Balaji Bajirao-Third battle of Panipat.

MAPS FOR STUDY

1. Khilji Empire under Alauddin Khilji
2. Tughaluq Empire under Mahammud-bin -Tughalaq
3. Mughal Empire under Akbar
4. Maratha Empire at its Zenith

Historical Places

1 . Delhi
2. Agra
3. Alahabad
4. Poona
5. Peshawar
6. Sasaram
7. Surat
8 Daulatabad
9 Panipat
10. Warangal
11 Dwarasamudra
12 Lahore
13 Rajgarh
14. Amarkot
15. Srinagar
16. Chittur
17 Attok
18 Fattepur Sikri
19 Ajmer
20 Amrithsar

BOOKS FOR STUDY AND REFERENCE

01	Irfan Habib (Ed)	-	Medieval India (1200-1750)
02	Satish Chandra	-	Medieval India from Sultanate to Mughalas
03	Ali, M. Athar	-	The Mughal Nobility under Aurangzeb
04	R.C. Majumdar and others	-	Advanced History of India
05	A. L. Basham	-	The wonder that was India
06	J.L Mehta	-	Advanced Study in the History of Medieval India -volume II
07	Satish Chandra	-	Medieval India From Sultanate to the Mughals
08	Habib, Mohammad & Khaliq Ahmad Nizami (eds) A comprehensive History of India, Vol V. The Delhi Sultanate (1206-1526)		
09	Nizami, Khaliq Ahmad- Religion and Politics in India during the Thirteenth Century		
10	Qureshi, Ishtiaq Husain	-	The Administration of the Mughal Empire
11	Richards , John F	-	The Mughal Empire
12	Tripathi, R.P.	-	Some Aspects of Muslim Administration
13	Chandra , Satish		Mughal Religious Policies the Rajputs and the Deccan
14	Chandra , Satish	-	Essays on Medieval Indian History, New Delhi-Oxford University Press 2003
15	Hassan, S. Nurul	-	Religion, State and Society in Medieval India
16	Srivastava A.L.	-	Akbar the Great 3 Vols.
17	Streusand Douglas E	-	The Formation of the Mughal Empire

III semester B.A History Syllabus

DSC – 1 C (core) Credit – 6 (5+1+0)

Title of the Paper :- History of Modern India 1757 to 1858 A.D.

Unit : I Coming of The Europeans : Portuguese-
Dutch – British and French Carnatic wars

Unit : II Expansion of British Power in India :

(1) Conquest of Bengal –Battle of Plassey and Buxer
(2) Anglo- Maratha wars
(3) Ranjith Singh-Anglo-Sikh wars

Unit III : Administrative Reforms :

(1) The Regulating Act of 1773- Pitt's India Act of 1784
(2) Administrative Reforms of Lord Cornwallies
(3) Administrative Reforms of William Bentinck

Unit IV : Economic policy & Social Reforms :

(1) Land Revenue policy – The Zamindari- Ryotwari & Mahalwari system.
(2) Development of Transport & communications Railways, Post & Telegraph
(3) Social Reforms – RajaRam Mohan Roy & Ishwara Chandra Vidya Sagar and Aligarh movement

Unit V : The Revolt of 1857

(a) Causes and Results of the revolt
(b) Queen Victoria's proclamation of 1858

Map for Study

(1) Presidency States of British Empire
(2) Sikh Empire under Ranjith Singh
(3) 1857 British Empire
(4) Historical Places

1 . Plassey	8 Thirchanapally	15. Hoogly
2. Boxer	9 Hyderabad	16. Ludiyana
3. Mysore	10. Vellore	17 Barakpur
4. Arcot	11 Wandiwash	18 Jhansi
5. Bessin	12 Madras	19 Gwalior
6. Salsatte	13 Calcutta	20 Nagapur

7. Machalipatnam 14. Bombay

BOOKS FOR STUDY AND REFERENCE

01	R.C. Majumdar	-	Advanced History of India
02	V.D. Mahajan	-	History of Modern India
03	M.K. Roy	-	Princely States and Paramount Power
04	Raychaudari	-	Social , Cultural and Economic History of I Modern Times
05	Bipin Chandra	-	Nationalism and Colonialism in India
06	Grover and Grover	-	A New Look at on Modern Indian History
07	Percival Spear	-	Oxford History of Modern India (1740-1975)
08	Sumith Sarkar	-	Modern India (1985-1947)
09	A.R. Desai	-	Social Background of Indian Nationalism
10	Hassan Imam	-	Indian National Movement
11	Gopal S.	-	British Policy in India (1858 -1905)
12	Srinivas M.N.	-	Social Change in Modern India
13	Mishra	-	The Uniform and Division of India
14	Anil Seel	-	The Emergence of Indian Nationalism
15	Tarachand and others	-	Indian National Movements volumes

IV semester B.A History Syllabus

DSC – 1 D (core) Credit – 6 (5+1+0)

Title of the Paper:- INDIAN NATIONAL MOVEMENT -1885-1947 A.D.

Unit – I : RISE OF NATIONALISM :

(a) Causes for the rise of Indian Nationalism
(b) Foundation of Indian National congress
(c) Era of the Moderates (1885-1905) Gopalakirshna Gokale, S.N. Banerje

Unit - II : RISE OF EXTREMISTS :

(a) Lala Lajputh Rai, Bipin Chadra Pal, Balagandhara Tilak, Partition of Bengal.
(b) 1909 Act- Minto -Morley Reforms

Unit – III **:** NATIONALISM DURING 1ST WORLD WAR :

(a) Lucknow pact 1916
(b) Home Rule movement 1916
(c) Rowlatt Act & Jallian Walabagh Tragedy 1916
(d) Revolutionary Nationalism –Bhagat Singh –Chandra Shekar Azad

Unit – IV **:** GANDHIAN ERA :

(a) Non –Co-operation Movement –Civil Dis-obedience movement
(b) Simon Commission 1927-28 –Round table conference and Dr. Ambedkar

Unit : V : FINAL PHASE :

(a) India National Army (INA) and Subhashandrabose
(b) 1935 Act –Quit India movement
(c) Growth of Communalism –Muslim League -1906 -Hindu Mahasabha –two Nations theory
(d) Partition and Independence -1947 Act.

- No Maps

BOOKS FOR STUDY AND REFERENCE

01 Bipin Chanra - Nationalism and Colonialism in India

02	Bipin Chandra	-	India's Struggle for Independence
03	Bipin Chandra	-	Nationalism and Communalism in Modern India
04	Grover and Grover	-	A New Look at on Modern Indian History
05	R.C. Majumdar	-	Struggle for Freedom
06	Percival Spear	-	Oxford History of Modern India (1740-1975)
07	Sumit Sarkar	-	Modern India (1885-1947)
08	A.R. Desai	-	Social Background of Indian Nationalism
09	Hassan Imam	-	Indian National movement
10	Gopal S.	-	British Policy in India (1858-1905)
11	Srinivas M.N.	-	Social Change in Modern India
12	Mishra	-	The Unification and Division of India
13	Anil Seel	-	The Emergence of Indian Nationalism
14	Tarachand and others	-	Indian National Movements Volumes

V semester B.A History Syllabus

DSE – 1 A (Elective) Credit 6(5+1+0)

Title of the Paper :- History & Culture of South India upto 1336 A.D.

Unit -1 Sources – Literary and Epigraphy –Aracheological Sources Sathavahanas - Gauthamiputra Satakarni – Cultural contributions – Chalukyas of Badami –Pulakeshi II-Cultural Contribution, Pallavas of Kanchi, Mahendravarman I, Narasimha- Varman I- Cultural Contributions.

Unit –II Rashtrakutas of Manyaketa –Govinda III -Amoghavarsha Nripatunga-Chalukyas of Kalyana-Vikramaditya VI-.

Unit – III : Hoysalas of Dwarasamudra-Vishnuvardhana –Ballala II : Art and Architecture –Cholas of Tanjore-Rajaraja Chola I Rajendra Chola – Administration -Art and Architecture.

UNIT –IV Society of South India –Economic conditions –Caste system –Guild System Brahamadeya –Devadaya

Unit –V Development of Religions in South India –Shankaracharya – Ramanujacharya-Madvacharya –Basavanna –Socio & Religious Reforms.

MAPS FOR STUDY

1. Chalukya Empire under Pulakeshi II
2. Rashtrakuta Empire under Govinda III
3. Kalyani Chalukya empire under Vikramaditya VI
4. Extent of Hoysala State under Ballala II

Historical Places

1 . Badami
2. Ihole
3. Pattadakal
4. Manyaketa
5. Kanchi
6. Tanjore
7. Madurai
8 Gangaikonda Cholapuram
9 Nasik
10. Kalyana
11 Dwarasamudra
12 Belur
13 Mahabalipuram
14. Kalati
15. Perambur
16. Udupi
17 Kudalasangama
18 Maski
19 Brahmagiri
20 Sravanabelagola

BOOKS FOR STUDY AND REFERENCE

01	K.A. Nilakanta Shastry	-	History of South India
02	Keshavan Veluthat	-	State Formation in South India
03	Gupta K.M.	-	Land system in South India 800 1200 A.D.
04	S. Rajashekaran	-	Karnataka Architecture
05	Champaka Lakshmi	-	Urbanization in South India
06	Harie J.C.	-	The Art and Architecture of the Indian subcontinent
07	R.R. Diwakar	-	Karnataka through the Ages
08	Mugali R.S.	-	The Heritage of Karnataka
09	R.G. Bandarkar	-	History of Decan
10	G. Yazdani	-	History of Deccan
11	K.A. Nilakanta Shastry	-	The Cholas
12	R.C. Majumdar and others	-	Advanced History of India

OR

V semester B.A History Syllabus

DSE – 1 A (Elective) Credit 6(5+1+0)

Title of the Paper :- Principles of Tourism

Unit -1 CONCEPTS OF TOURISM

Nature –Scope –Definition-Tourists and Excursionists-Domestic Tourists and International Tourists

Unit –II History of Tourism

Early period Greek –Roman –Chinese and Indian conception of Tourism

Medieval period Grand Tour –Italy, Arab and European Travelers-Alberuni, Marcho Polo –Ibna-batuta Al –Masudi etc,.

Modern period- Rise of Organized tour in Europe and India-Thomas Cook company etc,.

UNIT III- TYPES OF TOURISM

Heritage Tourism-Recreation Tourism-Advance Tourism- Health Tourism

Environment tourism

Unit –IV : PLANNING AND DEVELOPMENT OF TOURISM

Policies : Govt of India : Govt of Karnataka- UNESCO Guidelines

UNIT – V TOURIST PLACES ;

Chamarajanagara District : B.R. Hills , MM Hills-

Hassan District - Shravanabelagola-Belur – Halebedu

Mandya District : Hosaholalu, Kambadahalli, Srirangapatana

Mysore District –Nanjangud, Mysore, Somanathapura, Talakad

Maps

Historical Places

1 . Belur
2. Halebedu
3. Hampi
4. Badami
5. Aihole
6. Pattadakalu
7. Bijapur
8 Srirangapatana
9 Mysore
10. Chitradurga
11 Tanjore
12 Madurai
13 Kanchi
14. Rameshwara
15. Mahabalipuram
16. Madras
17 Tiruvananthapura
18 Kanyakumari
19 Hyderabad
20 Pondichery

BOOKS FOR STUDY AND REFERENCE

01 Ashorth G.J - Marketing in Tourism Industry
02 Bhatia A.K. - International Tourism
03 Bhatia A.K. - Tourism Development
04 Chunk Kelvin Dextra and Jane - Professional Travel Agency Management
05 Clare, Gunn - Tourism Planning
06 Gregory A - The Travel Agent : Dealers in Dream
07 Tourism Department publications and Folders
08 Jafari J - Anatomy of the Travel Industry
09 Khan, Nafees A - Development Tourism in India
10 Krippendrof J - The Holiday Makers
11 Krishna K Karama - Basics of Tourism

12 KSTDC Publication Individual Folders

13 KSTDC Publication, Karnataka Traveler Bangalore

14 Kulakarni M.V - Tourism Marketing

15 Marrison A.M. Hospitality and Travel Marketing

16 Peters Mischel International Tours

17 Ranga Mukesh Tourism Potential in India

18 Sarkar H. Museums and protection of Monuments and Antiquities in India

19 Seth Pran Successful Tourism Management

20 ITDC Publications and Folders

21 Vijayalakshmi K.S. - History and Tourism

V semester B.A History Syllabus

DSE – 2 A (Elective) Credit 6(5+1+0)

Title of the Paper :- State and Society in South India (1336 to 1800 A.D)

Unit –I : Vijayanagara Empire (a)–Sources – (b)Origin- theories.

Unit – II : Sangam Dynasty -Devaraya II-Tuluva Dynasty-Krishnadevaraya-Aravidu Dynasty –Aliya Ramaraya- Bahamani Empire- Mahammad Gawan Art and Architecture –Adilshah's of Bijapur

Unit - III : Society of South India during Vijaynagar –Vyasaraya- Purandaradasa – Kankadasa –- Karnataka Sufism – Quaja –Bande –Nawaj

Unit –IV :

(a) Administrative system of Vijayanagara
(b) Cultural contributions of Vijayanagara-Religion –literature –Art and Architecture
(c) Cultural contributions of Bahamani Sultans-Religion, Literature, Art and architecture

Unit –V : Wodeyars of Mysore- Chikkadevaraja Wodeyar-Life and Achievements-Nayakas of Ikkeri-Shivappa Nayaka –Palegaras of Chitradurga- Madakari Nayaka v, Haider and Tippu Sultan- Anglo-Mysore –Wars

MAPS FOR STUDY

1. Vijaynagara Empire under Krishnadevaraya
2. Bahamani State Under Gawan
3. Mysore State under Tippu Sultan-1799

Historical Places

1 . Talikote
2. Hampi
3. Raichur
4. Penagonda
5. Golkonda
6. Bijapur
7. Gulbarga
8 Chitradurga
9 Ikkeri
10. Budikote
11 Devanahalli
12 Bababudangiri
13 Bidar
14. Kaginele
15. Ahmadnagar
16. Mysore
17 Yalandur
18 Bangalore
19 Devarayana Durga
20 Srirangapatna

BOOKS FOR STUDY AND REFERENCE

01	Burton Stein	- Peasant State and Society in Medieval South India
02	Robert Sewell	- A Forgotten Empire
03	T.V. Mahalingam	- South Indian Polity
04	B.A. Salatore	- Political life in Vijayanagara Empire-2 Volumes
05	K.A. Nilakanta Shastry	- History of South India
06	Keshvan Veluthat	- State Formation in South India
07	Gupta K.M.	- Land System in South India 800-1200 A.D
08	S. Rajashekaran	- Karnataka architecture
09	Champaka Lakshmi	- Urbanization in South India
10	R.R. Diwakar	- Karnataka through the Ages
11	Harle J.C	- The Art and Architecture of the Indian Subcontinent
12	Mugali R.S	- The Heritage of Karnataka
13	R.G. Bandarkar	- History of Deccan
14	G. Yazdani	- History of Deccan
15	K.A. Nilakanta Shsastry	- The Cholas
16	R.C. Majumdar and others	- Advanced History of India
17	N. Saraswathi	- Position of women during vijayanagar period

V semester B.A History Syllabus

DSE – 3 A (Elective) Credit 6(5+1+0)

Title of the Paper :- Colonialism and Nationalism in Asia (1800 to 1950 A.D)

Unit -1 : China –The Opium Wars –Taiping Revolt –The Boxer Revolt-Dr. San yat Sen-Chiang-Kai-Shek-Kouming-Tang party- Mao –tse-tung- communists.

Unit –II : Rise of Modern Japan – Meiji era-Japan as World power – Sino Japanese War – Anglo Japanese Treaty-Russo-Japanese war-Japan between two World wars. Washington conference – Mukden Incident pearl harbor incident – (Japan under SCAP)

Unit –III : European Colonial interests and Wrecking of the Ottoman Empire-Young Turk movement -Modernism of Turkey- Mustafa Kemal Pasha Attaturk

Unit – IV : Modernism of Iran – Rezashah Pahlvi –Dr Mossadiq

Unit –V Western Colonial interests – Rise of Arab Nationalism –Balfour declaration-creation of Israel

MAPS FOR STUDY

1. China People Republic
2. Japan after 1942
3. Turkey under Mustafa Kemal Pasha
4. Creations of Israel

Historical Places

1 . Peking
2. Nanking
3. Canton
4. Shanghai
5. Mukdane
6. Macau
7. Tokyo
8 Hiroshima
9 Nagasaki
10. Constantinople
11 Saigon
12 Teheran
13 Tel-Aviv
14. Ankara
15. Jerusalem
16. Port-Arthur
17 Mosel
18 Madina
19 Damascus
20 Seoul

BOOKS FOR STUDY AND REFERENCE

01	S.L. Roy	-	History of for East and South –East Asia Volumes
02	Luke	-	Modern Turkey
03	Edward Said	-	The Growth of Palestine
04	D.G.E Hall	-	History of South Asia
05	Shaik Ali	-	A Short History of Modern Asia
06	K.M. Pannikar	-	Asia and Western Dominance
07	H.M. Vinacke	-	A history of the Far-East in Modern Times
08	M.D. David	-	Rise and Growth of Modern China
09	Charles Hazen	-	History of Modern World
10	Swain James Edgar	-	History of World Civilization.

VI semester B.A History Syllabus

DSE – 1 B (Elective) Credit 6(5+1+0)

Title of the Paper :- History of Modern Europe (1789 to 1945 A.D.)

UNIT -1 ; The French Revolution –Causes –Role of Philosophers- Oath of Tennis Court-Work of National Assembly –The Reign of Terror –Jacobins and Girondists – Napoleon Bonaparte-Military achievements and Reforms .

UNIT –II ; The Vienna Congress –Metternich.

UNIT –III : The Unification of Italy – Unification of Germany-German Empire after 1871, Domestic and foreign policy of Bismarck -The Growth of Socialism in Europe-Karl Marx

Unit – IV : The First World War- Causes and Results –The Russian Revolution of 1917- causes and results – league of Nations.

UNIT –V Rise of Dictators-Fascism and Nazism –The Second World War –Causes and Results- United Nations Organization (UNO) –Achievements and Failures of UNO

MAPS FOR STUDY

1. Napoleon Empire
2 Europe in 1815 after Vienna Congress
3. Italy in 1870
4. German Empire in 1871

Historical Places

1. Paris
2. London
3. Madrid
4. Vienna
5. Berlin
6. Ban
7. Frank Furt
8 Water Loo
9 Trafalgar
10. Marcopolo
11 Rome
12 Ajjacio
13 Lenin Grad
14. Geneva
15. Genoa
16. Amsterdam
17 Versailles
18 Constantinople
19 Crimea
20 The Hague

BOOKS FOR STUDY AND REFERENCE

01	Edward Davis	-	Europe-A History
02	Gokhale B.K.	-	Modern Europe 1848 to 1960
03	H.A.L. Fisher	-	A History of Europe (2 Volumes)
04	David Thomson	-	Europe since Napoleon
05	C.D. Hazen	-	Europe since 1815
06	Charles Hazen	-	History of Modern World
07	Swain James Edgar	-	History of World civilization
08	Wallbank and Taylor	-	Civilization of Past and present
09	J.P. Taylor	-	The struggle for mastery in Europe in 19th and 20th Century.
10	H.E. Bames	-	Intellectual History of Europe

VI semester B.A History Syllabus

DSE – 2 B (Elective) Credit 6(5+1+0)

Title of the Paper :- India And Contemporary World (1950 To 1995 A.D.)

Unit – I : **Rise of Modern India**

1. Consequence of partition
2. Re organization of Linguistic States
3. Integration of Goa and Pondicherry
4. Foreign policy of Nehru

Unit –II :

1. Agricultural and Industrial development during First three five year plan
2. Development of Education after 1947 – Radakrishnan commission- Kotari commission – NEP-1986

Unit – III : The Cold War and the Power Blocks –Stages of Cold War-Bandung conference and Non -Align Movement-The Arab- Israel Wars.

Unit – IV : Indian and international relations –India-China, India-Pakistan, India-ASEAN-SAARC.

Unit –V : Apartheid policy in South Africa- Establishment of South African Republic – Nelson Mandela – Revolution of Cuba – Fidel Castro

No Maps :

BOOKS FOR STUDY AND REFERENCES

01 Arjun Dev - Contemporary World
02 Brunn Geoffrey - The World in the Twentieth Century
03 Norman Lowe - Mastering Modern World History
04 John Edwin Fogg - Latin America

05	K.M. Pannikar	-	Revaluation in Africa
06	William Yale	-	The Near East
07	Calvocoressi Peter	-	World Politics since 1945
08	Bipin Chandra	-	Communalism in Modern India
09	V.K.R.V Rao	-	Nehru Legacy
10	K.P. Misra and Narayanan	-	Non -Alignment in International Relations
11	B.R. Nanda (Ed)	-	India 's Foreign Policy
12	William R. Keyler	-	The Twentieth Century World
13	Vinacke	-	History of Far-East
14	Sumit Sarkar	-	Modern India
15	Bipin Chandra		India after Independence
16	Ramachandra Guha		India after Gandhi
17	Shoba Kappor		History of Modern India and contemporary world
18	David Field house		The West and the third world
19	Jan-J. Bickerton		The Arab Israeli Conflict – A History.

VI semester B.A History Syllabus

DSE – 3 B (Elective) Credit 6(5+1+0)

Title of the Paper :- History of Modern Karnataka (1800 to 1956 A.D)

Unit -1 : Sources - James Manor – Hettne –B.L. Rice – Hayavadana Rao-R.R. Diwakar-P.B. Desai. Restoration of Mysore State- Subsidiary treaty Administration of Krishnaraja Wodeyar III., Nagar uprising of 1831.

Unit –II : Mysore Under Direct rule of British – Mark Cubbon– Bowring reorganization of Administration.- Revenue- Judiciary -

Unit –III : Rendition of Mysore-Modernization-Rangacharlu-K. Sheshadri Iyer-Nalwadi Krishnaraja Wodeyar- Vishweswaraiah – Mirza Ismail.

Unit – IV : Freedom Movement- Hyderabad and Bombay Karnataka. Region

Era of moderates- Extremists- Era of Gandhi.

Unit –V : Process of Social and cultural development –Development of Kannada Language and Literature- Backward class Movement- Freedom movement in Karnataka -Unification movement of Karnataka.

MAPS FOR STUDY

1. Mysore after Rendition 1881
2. Industrial centers under Vishwaraiah's Diwanship
3. Industrial Centers under Mirza Ismail's Diwanship
4. Mysore State of 1956

Historical Places

1. Mysore	8 Belagola	15. Shimoga
2. Kolar	9 Nanjangud	16. Yalandur
3. Krishnaraja Sagara	10. Madras	17 Chamarajnagara
4. Shivapura	11 Kalale	18 Mangalore
5. Bangalore	12 Dharwar	19 Udupi
6. Srirangapatana	13 Belgaum	20 Ankola

7. Mandya 14. Hubli

BOOKS FOR STUDY AND REFERENCE

01	P.B. Deasi	-	History of Karnataka
02	K.R. Basavarju	-	History and Culture of Karnataka
03	Sheik Ali B	-	Tippu Sultan
04	Shastry K.N.V.	-	Economic Development of Mysore
05	Hayavadana Rao	-	Mysore Gazetteer Volumes
06	K.A. Nilakanta Shastry	-	History of South India
07	Keshvan Veluthat	-	State Formation in Sough India
08	S. Rajashekaran	-	Karnataka Architecture
09	Champaka Lakshmi	-	Urbanization in South India
10	R.R. Diwakar	-	Karnataka through the Ages
11	Shama Rao M.	-	History of Mysore
12	B.L. Rice	-	Mysore Gazetteer Volumes
13	Mugali R.S	-	The Heritage of Karnataka
14	R.G. Bandarkar	-	History of Deccan

OR

VI semester B.A History Syllabus

DSE – 3 B (Elective) Credit 6(5+1+0)

Title of the Paper :- Tourism Development and Organization

UNIT –I : Planning and Development of Tourism : Basic infrastructure Planning Process (Economic Planning –Administration Organization) Demand and Supply-Supervisor : Basic Supportive Service UNO-Conference of Tourism-Sustainable Tourism (World Tourism Organization) Co-ordination Tourism

UNIT – II : Indian Tourism: Sarjent Report on Tourism –Promoting Agencies-ITDC – Aims and objectives and construction of Hotels, Resorts & Restaurants

UNIT-III : Karnataka Tourism : KSTDC –Establishment –Aims & Objective-Activities-Facilities –Jungle Lodge and Resorts, Home stays

UNIT IV : World Tourism –Establishment –Conference etc, IUOTO (international Union of Official Travel Organization)World Tourism Organization (WTO)-Pacific Asia Travel Association (PATA) Establishment –Activities –membership-Secretariat-PATA Chapters.

UNIT-V : Heritage sites- World Heritage Establishment – Definition –Classification-ASI –State ASI Museums –NCL-National conservation Laboratory. RCL-Regional Conservation Laboratory, Dharmothana Trust. Conservation Efforts-State and Central Monumental Acts-Ancient Monuments preservation Act of 1904 (Lord Curzon) Act of 1958 and 1972

Maps

Historical Places

1. Delhi
2. Amrutasara
3. Amarnatha
4. Buddagaya
5. Khajuraho
6. Konarak
7. Nagarjuna konda
8 Ajantha
9 Jaipura
10. Luknow
11 Mahabalipuram
12 Thirvanathapura
13 Mysore
14. Dharmastala
15. Kittur
16. Hampi
17 Pattadakalu
18 Medicare
19 Gulburga
20 Chitradurga

BOOKS FOR STUDY AND REFERENCE

01 Ashorth G.J. - Marketing in Tourism Industry

02 Bhatia A.K. - International Tourism

03 Bhatia A.K. - Tourism development

04 Chunk Kelvin Dextra and Jane - Professional Travel Agency, Management

05 Clare, Gunn - Tourisms Planning

06 Gregory A. - The Travel Agent-Dealers in Dream

07 Tourism Department Publications and Folders

08 Jafari J - Anatomy of The Travel Industry

09 Jgabm Bafees A - Development Tourism in India

10 Krippendrof J. - The Holiday Makers
11 Krishna K. Karama - Basics of Tourism
12 KSTDC Publication Individual Folders
13 KSTDC Publications, Karnataka Traveler Bangalore
14 Kulakarni M.V. - Tourisms Marketing
15 Marrison A.M. - Hospitality and Travel Marketing
16 Peters Michel - International Tours
17 Ranga Mukesh Tourism potential in India
18 Sarkar H. Museums and protection of Monuments Antiquities in India
19 Seth Pran Successful Tourisms Management
20 ITDC Publications and Folders

V. semester B.A History Syllabus

GE – 1 Credit – 2 (1+1+0)

Title of the Paper :- History of Modern India 1757 to 1858 A.D.

Unit : I Coming of The Europeans : Portuguese-
Dutch – British and French Carnatic wars

Unit : II Expansion of British Power in India :

(4) Conquest of Bengal –Battle of Plassey and Buxer
(5) Anglo- Maratha wars
(6) Ranjith Singh-Anglo-Sikh wars

Unit III : Administrative Reforms :

(4) The Regulating Act of 1773- Pitt's India Act of 1784
(5) Administrative Reforms of Lord Cornwallies
(6) Administrative Reforms of William Bentinck

Unit IV : Economic policy & Social Reforms :

(4) Land Revenue policy – The Zamindari- Ryotwari & Mahalwari system.
(5) Development of Transport & communications Railways, Post & Telegraph
(6) Social Reforms – RajaRam Mohan Roy & Ishwara Chandra Vidya Sagar and Aligarh movement

Unit V : The Revolt of 1857

(c) Causes and Results of the revolt
(d) Queen Victoria's proclamation of 1858

Map for Study

(5) Presidency States of British Empire
(6) Sikh Empire under Ranjith Singh
(7) 1857 British Empire
(8) Historical Places

1 . Plassey	8 Thirchanapally	15. Hoogly
2. Boxer	9 Hyderabad	16. Ludiyana
3. Mysore	10. Vellore	17 Barakpur
4. Arcot	11 Wandiwash	18 Jhansi
5. Bessin	12 Madras	19 Gwalior
6. Salsatte	13 Calcutta	20 Nagapur

7. Machalipatnam 14. Bombay

BOOKS FOR STUDY AND REFERENCE

01	R.C. Majumdar	-	Advanced History of India
02	V.D. Mahajan	-	History of Modern India
03	M.K. Roy	-	Princely States and Paramount Power
04	Raychaudari	-	Social , Cultural and Economic History of I Modern Times
05	Bipin Chandra	-	Nationalism and Colonialism in India
06	Grover and Grover	-	A New Look at on Modern Indian History
07	Percival Spear	-	Oxford History of Modern India (1740-1975)
08	Sumith Sarkar	-	Modern India (1985-1947)
09	A.R. Desai	-	Social Background of Indian Nationalism
10	Hassan Imam	-	Indian National Movement
11	Gopal S.	-	British Policy in India (1858 -1905)
12	Srinivas M.N.	-	Social Change in Modern India
13	Mishra	-	The Uniform and Division of India
14	Anil Seel	-	The Emergence of Indian Nationalism
15	Tarachand and others	-	Indian National Movements volumes

V. semester B.A History Syllabus

GE – 2 Credit – 2 (1+1+0)

Title of the Paper:- INDIAN NATIONAL MOVEMENT -1885-1947 A.D.

Unit – I : RISE OF NATIONALISM :

(d) Causes for the rise of Indian Nationalism
(e) Foundation of Indian National congress
(f) Era of the Moderates (1885-1905) Gopalakirshna Gokale, S.N. Banerje

Unit - II : RISE OF EXTREMISTS :

(c) Lala Lajputh Rai, Bipin Chadra Pal, Balagandhara Tilak, Partition of Bengal.
(d) 1909 Act- Minto -Morley Reforms

Unit – III : NATIONALISM DURING 1ST WORLD WAR :

(e) Lucknow pact 1916
(f) Home Rule movement 1916
(g) Rowlatt Act & Jallian Walabagh Tragedy 1916
(h) Revolutionary Nationalism –Bhagat Singh –Chandra Shekar Azad

Unit – IV : GANDHIAN ERA :

(c) Non –Co-operation Movement –Civil Dis-obedience movement
(d) Simon Commission 1927-28 –Round table conference and Dr. Ambedkar

Unit : V : FINAL PHASE :

(e) India National Army (INA) and Subhashandrabose
(f) 1935 Act –Quit India movement
(g) Growth of Communalism –Muslim League -1906 -Hindu Mahasabha –two Nations theory
(h) Partition and Independence -1947 Act.

- No Maps

BOOKS FOR STUDY AND REFERENCE

01	Bipin Chanra	-	Nationalism and Colonialism in India
02	Bipin Chandra	-	India's Struggle for Independence
03	Bipin Chandra	-	Nationalism and Communalism in Modern India
04	Grover and Grover	-	A New Look at on Modern Indian History
05	R.C. Majumdar	-	Struggle for Freedom
06	Percival Spear	-	Oxford History of Modern India (1740-1975)
07	Sumit Sarkar	-	Modern India (1885-1947)
08	A.R. Desai	-	Social Background of Indian Nationalism
09	Hassan Imam	-	Indian National movement
10	Gopal S.	-	British Policy in India (1858-1905)
11	Srinivas M.N.	-	Social Change in Modern India
12	Mishra	-	The Unification and Division of India
13	Anil Seel	-	The Emergence of Indian Nationalism
14	Tarachand and others	-	Indian National Movements Volumes

ಮೌಲ್ಯಮಾಪನ. ಯೋಜನೆ

6 ಕ್ರೆಡಿಟ್‌ಗಳು ಇರುವ ಪ್ರತಿ ಚಾತುರ್ಮಾಸ ಪರೀಕ್ಷೆಗಳಲ್ಲಿ 100 (ನೂರು) ಅಂಕಗಳಿಗೆ ಮೌಲ್ಯಮಾಪನ ಇರತಕ್ಕದ್ದು

100 (ನೂರು) ಅಂಕಗಳಲ್ಲಿ C^1 ಪರೀಕ್ಷೆಗೆ 10 ಅಂಕಗಳನ್ನು ನಿಗಧಿಪಡಿಸಲಾಗಿದೆ

C^2 ಪರೀಕ್ಷೆಗೆ 10 ಅಂಕಗಳನ್ನು ನಿಗಧಿಪಡಿಸಲಾಗಿದೆ

C^3 ಪರೀಕ್ಷೆಗೆ 80 ಅಂಕಗಳನ್ನು ನಿಗಧಿಪಡಿಸಲಾಗಿದೆ

- C^3 ಪರೀಕ್ಷೆಯ 80 ಅಂಕಗಳಲ್ಲಿ 15 ಅಂಕಗಳ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ(15x2=30), ಪರ್ಯಾಯ ಆಯ್ಕೆಯ ಪ್ರಶ್ನೆಗಳೊಂದಿಗೆ

- 10 ಅಂಕದ 2 ಪ್ರಶ್ನೆಗಳಿಗೆ (10x2=20), ಪರ್ಯಾಯ ಆಯ್ಕೆಯ ಪ್ರಶ್ನೆಗಳೊಂದಿಗೆ

- 5 ಅಂಕಗಳ 4 ಲಘುಟಿಪ್ಪಣಿಗಳಿಗೆ ವಿದ್ಯಾರ್ಥಿಗಳು ಉತ್ತರಿಸಬೇಕು (5x4=20), ಪರ್ಯಾಯ ಆಯ್ಕೆಯ ಪ್ರಶ್ನೆಗಳೊಂದಿಗೆ
- ಭೂಪಟವಿಲ್ಲದೆ ಇದ್ದ ಪಠ್ಯಕ್ರಮದಲ್ಲಿ 5 ಅಂಕಗಳ 6 ಲಘುಟಿಪ್ಪಣಿಗಳಿಗೆ (5x6=30) ಪರ್ಯಾಯ ಆಯ್ಕೆಯ ಪ್ರಶ್ನೆಗಳೊಂದಿಗೆ, ವಿದ್ಯಾರ್ಥಿಗಳು ಉತ್ತರಿಸಬೇಕು
- 10 ಅಂಕದ ಭೂಪಟ ಕುರಿತ 1 ಪ್ರಶ್ನೆಗೆ ಭೂಪಟ ರಚನೆಗೆ 4 ಮತ್ತು ಎಲ್ಲೆ ಗುರ್ತಿಸಲು 6 ಅಂಕಗಳು(6+4=10,) ವಿದ್ಯಾರ್ಥಿಗಳು ಉತ್ತರಿಸಬೇಕು.

Scheme of Examination

Under Graduate Course in History
For
(DSC/DSE/with 6 credits)
I, II, III, IV, V and VI Semesters of B.A., (C1-10, C2-10, C3-80 total=100 Marks)
Scheme of Examination for 80 Marks

Model Question Paper

Main Question number I answer any of **two** of the following, (15x2=30)

a.----------
b.----------
c.----------
d.----------

II. Answer any two of the following (10x2=20)

a.----------
b.----------
c.----------
d.----------

III. Short Notes answer any of the four of the following (5x4-20)

a.----------
b.----------
c.----------
d.----------
e.----------
f.----------
g.----------
h.----------

IV. Map works (4marks for boundary (tracing / identifying/ drawing) line, 6. marks for Marking important places) . **(4+6=10)**

Note:- the Map work is not given in those cases two more question can be asked in short note section

ಡಾ. ಅಶ್ವತ್ಥನಾರಾಯಣ
ಅಧ್ಯಕ್ಷರು
ಇತಿಹಾಸ ಸ್ನಾತಕ ಅಧ್ಯಯನ ಮಂಡಳಿ