

EUCLID UNIVERSITY

SYLLABUS BOOKLET

MASTERS OF PHILOSOPHY

**SYLLABUS
MASTERS OF PHILOSOPHY
PAPER-I**

RESEARCH METHODOLOGY

Unit 1: Introduction to Research

Concept of Research, Approaches to Research, Types of Research, Need for Research, Major Difficulties in the Area of Business Research, Research Methodology - Formulation and Identification of Research Problem; Scope, Period and Objectives of Research; Hypothesis; Research Design (Observational Design, Analytical Design and Sampling Design) for Different Types of Researches - Exploratory, Descriptive and Analytical

Unit 2: Methods of Data Collection

Primary and Secondary Data; Methods for Primary Data - Schedule and Questionnaire, Field Visits, Interviews and Scaling Techniques. Major Sources of Secondary Data.

Unit 3: Statistical Analytical Tools

Processing of Data (Classification and Tabulation) and an Overview of Measures of Central Tendency, Variation, and Skewness; Simple, Partial and Multiple Correlation and Regression; Coefficient of Association and Analysis of Time Series. (An Elementary Exposure for the use of SPSS should be explained).

Unit 4: The Theory of Estimation and Hypothesis Testing

Universe / Population, Basic Laws of Sampling, Sampling Techniques, Sampling Distribution and Central Limit Theorem, Statistical Hypothesis, Errors in Hypothesis Testing, Levels of Significance, Point and Interval Estimates, Parametric Tests - Z-test, t-test and F-test for Small and Large Samples. Non-parametric Tests - Chi-square test, Sign test, MCNEMER test, Fisher Irvin test, Wilcoxon Matched Pairs test, Rank Correlation Co-efficient, Kruschal Wallis test and Kendall's Coefficient of Concordance.

Unit 5: Report Writing

Salient Features of an Ideal Ph.D. or M.phil level Research Report, Major Divisions of the Report, Method of Giving Footnotes, References, Appendix, Bibliography, etc. and precautions for writing the report.

Reference Books:

1. Business Research Methods by C. William Emory, Washington University, Richard D. Irwin, Inc. Homewood, Illinois, 1976.
2. Business Research Methods by Clover, Vernon T. and Belsley H. L
- 3 Theory and Practice in Social Research, by Hansraj, Delhi, 197
4. Research Methodology by C. R. Kothari, Vikas Publishing House, Delhi.
5. Statistical Methods by S. P. Gupta - Sultan Chand and Sons, New Delhi.

**SYLLABUS
MASTERS OF PHILOSOPHY
PAPER-II**

INNOVATIVE METHODS & TECHNIQUES OF TEACHING

Unit 1: Higher Education and Learning

Historical Perspectives, Objectives and Role of Higher Education, Learning and Learning Hierarchy, Information Processing, Learning Events and Outcomes, Motivation.

Unit 2: Teaching Technology: Designs

Oral Communication: Principles of successful oral communication, barriers to communication, what is conversation control, reflection and empathy: two sides of effective oral communication, effective listening non, verbal communication **Written Communication:** Purpose of writing, clarity in writing, principles of effective writing, approaching the writing process systematically, Pre writing, Writing – Revising – Specific writing features, coherence, electronic writing process. **Teaching Technology:** Meaning, concept and scope, Instructional Designs: Objective based, Skill based, Competency based, Learning style based and Model based.

Unit 3: Methods and Techniques of Teaching

Large Group Techniques: Lecture, Modified Lecture, Seminar, Symposium, Panel Discussion, Team Teaching, Project Approach and Workshop ... Small Group Techniques: Group Discussion, Simulation, Role Playing, Buzz Technique, Brain Storming, Case Discussion and Assignment, Systems Approach in Education.

Unit 4: Measurement and Evaluation in Education

Educational Evaluation: A Conceptual Framework, Methods of Evaluation, Self Evaluation and Student Evaluation in Higher Education, Question Banking, Diagnostic Testing and Remedial Teaching.

Unit 5: Computers and Electronic Media in Education

Introduction to computers: Logical organization of a computer, memory, input-output devices, secondary storage devices, data representation, assembly language and machine language instructions. **Human Computer Interface:** User interface with the Operating System. **Document Preparation:** Creating documents, formatting text, use of appropriate fonts, styles, layouts, tables and pictures. **Spreadsheet Handling:** Creating spreadsheet, use of labels, formatting text, date and time, mathematical, statistical and logical functions, graphs. **Network & Internet Technology:** Introduction to computer networks, network topologies, communication devices and media, Internet as information resource, use of a web-browser, e-mail, designing websites using available tools. **Database Systems:** Relational databases, tables, attributes, primary, foreign keys, normalization and **Introduction to SQL. Programming:** Data types, variables, control structures, functions and modules, arrays, interface with databases. **Instructional Media:** Concept, Selection, Use and Variety, e-Learning Resources: e Learning, e-books, e-journals,etc., Web- based Learning: Access and Teaching Issues.

Reference Books:

1. V. Rajaraman, Fundamentals of Computers, Prentice Hall of India, 2002
2. R. Hunt, J. Shelley, Computers and Commonsense, Prentice Hall of India, 2002
3. Gary D. Borich, Effective Teaching Methods, Fifth Edition, 2003
4. Aggarwal. J. C. (2008). Principles, methods & techniques of teaching. UP: Vikas Publishing House Pvt Ltd.
5. Excellence in Business Communication (6th Edition) by John Thill, Courtland L. Bovee.

SYLLABUS
MASTERS OF PHILOSOPHY (AGRICULTURE)
PAPER-III

AGRICULTURAL ECONOMICS

UNIT I

Role of agriculture in Indian economy – nature of India's culture – cropping pattern in India – share of agriculture in plan expenditure - - declining investments in agriculture and increasing subsidies – Indian agricultural policy.

UNIT II

Trends in agricultural production and productivity – low levels of productivity – causes of low productivity – measures to increase productivity increasing production and productivity. Tasks before the ninth plan farm size and productivity.

UNIT III

Objectives of land reforms – agricultural holdings in India – irrigation – fertilizers – green revolution – modern technology vs. Institutional reforms – national bank for agriculture and rural development – agricultural marketing – co-operative marketing.

UNIT IV

Agricultural prices and agricultural price policy – trends in agricultural price – need for agricultural price policy - agricultural price policy in India – evaluation of governments agricultural price policy.

UNIT V

Food security, public distribution system in India – definition of agricultural labor – growth in the number of agricultural workers – causes of growth in the number of agricultural workers conditions and problems of agricultural workers.

**SYLLABUS
MASTERS OF PHILOSOPHY (AGRICULTURE)
PAPER-IV**

AGRICULTURAL BIOTECHNOLOGY

Unit 1: Introduction

Cell structure and physiological processes, organellar ultrastructure, respiration, photosynthesis, growth regulators and nitrogen metabolism.

Unit 2: Genetic Engineering for Crop Improvement

Plant cell and tissue culture, gene transfer techniques into plant cells, application in agricultural and food industries.

Unit 3: Microbes in Agriculture and Food

Applied Microbiology in the future of mankind, moving frontiers of applied microbiology, microbial enzymes and their applications in food processing and agro-chemical industries, agro-waste utilization, biodegradable polymers and their applications, microbial polysaccharides; Production and utilization of essential amino-acids, chemicals from micro-algae.

Unit 5: Micorrhiza

Applications in agriculture and forestry

Unit 6: Food and Beverage Products

Traditional fermented food, single cell protein, glutamic acid fermentation, lactic acid, gluconic and Itaconic acid production.

Reference Books:

Molecular Biotechnology: Principles & Applications of Recombinant DNA, Glick & Pasternick—**Required New 3rd edition**

A Cartoon Guide to Genetics, Gonick--Optional.

Practical Applications of Plant Molecular Biology--Optional.

SYLLABUS
MASTERS OF PHILOSOPHY (BOTANY)
PAPER-III

BIODIVERSITY

UNIT - I

Biological Diversity – Systematics in Diversity – Environment and Genetic Variations – Nature and Origin; Biological Classification – Phylogenetic Relationship – Enumeration of Biodiversity – Ecological Biodiversity – Species Concept – Biological and Phylogenetic Concepts; Species Inventory – Global Patterns - Biodiversity hot spots. IUCN categories – Red data book.

UNIT II

Species Diversity – Global Distribution of Species – Diversity in terrestrial, marine and freshwater – Micro-organisms-lower and higher plants – lower and higher invertebrates and vertebrates; Species extinction and Endangered species; Monitoring indicator species and habitats; Diversity loss – causes and remediation.

UNIT III

Habitats and Ecosystem – Classification – Ecosystem mapping, tropical forests, grasslands, wetlands, coral reefs, mangroves; Economics of Ecosystem, Green Revolution, Food Plants, medicinal and ornamental plants, animal uses – livestock and fisheries; Biodiversity and Industry – Pharmaceutical – Aquaculture – Apiculture.

UNIT - IV

Conservation and Management – National Legislation – Protection of Wild flora and Fauna - Protection of National Habitats - National and International Protected Areas – Current Practices in Conservation - *in situ* Conservation and *ex situ* Conservation of Threatened Species – Biodiversity Bill 2002 – Patent Act – Agenda 21 – Multilateral Treaties – Biodiversity Conventions.

UNIT - V

Species Diversity – Case Studies – Deciduous Forests - Desert Lizard communities – Coral Reef - Fish Communities -Island species – Environmental ethics – Biodiversity – a Socio – Political Perspective – Western and Eastern Ghats - Himalayas.

REFERENCE:

1. Global Biodiversity – Status of the Earth's Living Resources, Brian Groombridge (1992) Chapman & Hall, London
2. Ecology of Natural Resources, Francois Ramade (1991), John Wiley.
3. Global Biodiversity and Strategy, IUCN (1992).
4. Biodiversity, Science and Development, Francesco di castri (1996) Backhuys Publishers, The Netherlands.
5. The Biology of Biodiversity, Kato, M (1999), Springer Verlag, Tokyo
6. Biodiversity Conservation – In Managed forest and Protected areas, Kotwal, P.C. and S. Banerjee (2002). Agrobios, India.
7. Global Biodiversity, Sinha, R.K (1997), INA Shree Publishers, Jaipur.
8. Megadiversity Conservation, flora, Fauna and Medicinal Plants of India's hot spots, Chaudhuri, A.B. and D.D. Sarkar (2003), Daya Publishing House, Delhi.

SYLLABUS
MASTERS OF PHILOSOPHY (BOTANY)
PAPER-IV

PLANT BIOTECHNOLOGY

UNIT-I:

Plant tissue culture: Cleaning, sterilization, sterile handling of tissue culture of plant. Nutritional requirement for in vitro culture. Concept of cellular totipotency, single cell culture, micro propagation, somoclonal variation and its application for plant improvement, somatic embryogenesis, anther and ovule culture, haploid and double-haploid production.

UNIT-II:

Protoplast culture: Isolation ,fusion and culture, somatic hybridization, selection system for hybrids , cybrid production and their application in crop improvement, cryobiology of plant cell culture and establishment of gene banks, production of virus free plants using meristem culture.

UNIT-III:

Plant cloning vectors: Ti and Ri plasmid and viral vectors (CaMV based vectors, Gemini virus, TMV based vectors). Mechanism of DNA transfer, role of virulence genes, use of 35S promoters, genetic markers, use of reporter genes, methods of nuclear transfer, particle bombardment, electroporation, microinjection, transformation of monocots, transgene stability and gene silencing , herbicide , insect and salt resistance , Plant DNA fingerprinting - Hybridization and PCR based markers (RFLP, SSRs, RAPD, QTLS , SCARS , AFLP etc.)

UNIT-IV:

Biological nitrogen fixation and biofertilization, molecular mechanism of nitrogen fixation, genetics of nif gene.

Plant diseases- general account, biological control of pests and disease, biopesticides, seed production technique, plant cell culture for the production of useful secondary metabolism-pigments, perfumes , flavor, pharmacologically important compounds, biodegradable plastics. Automation in Plant Tissue Culture for its commercial application.

UNIT-V:

Transgenic plants, commercial status and public acceptance, Bio-safety guidelines for research involving GMO's, benefits and risks. Socio economic impact and ecological consideration of GMO's, Gene flow, IPR and IPP. Patenting of biological.24

RECOMMENDED BOOKS:

1. Plant Tissue Culture: Theory & practice a revised edition(2004) Bhojwani & Rajdan
2. Plant Biotechnology (2000),Hammond et al
3. Plant Tissue Culture –Bhojwani, S.S.
4. Plant Cell & Organ culture(2004) Gamberg, O.L
5. Principles of Plant Biotechnology, Montell, et al
6. Plant Cell Culture (2003) Evans D.A.
7. Plant Molecular Biology- vol.I and II, Gimartin & Bowler
8. Genetic Engineering of Crop Plants, Lycett G.W. & Grierson D.

**SYLLABUS
MASTERS OF PHILOSOPHY (BIOCHEMISTRY)
PAPER-III**

PRINCIPLE OF BIOCHEMISTRY

Unit 1: Living Organism

The molecular logic of Living Organism, Water- properties, Electrolytic dissociation into cations and anions – Henderson – Hasselbalch equation, Proteins – General structural design. Aminoacids and peptides – covalent structure, three – dimensional structure and subunit structure. Fibrous proteins and Globular proteins. Structure and function of Haemoglobin and Myoglobin, Carbohydrates – structure and biological function, Enzymes – classification of enzymes. Specificity of enzyme action. Allosteric enzymes, enzyme inhibition and regulation of enzyme activity. Enzyme kinetics. Factors affecting enzyme activity. Vitamins as Coenzymes. Isoenzymes (LDH), Lipids – Saturated and unsaturated fatty acids. Triglycerides, phospholipids, glycolipids. Sterols – prostaglandins.

Unit: 2 Cellular Metabolism and Metabolic Cycles & Energy Production

Thermodynamics of cellular reactions. Redox potential, Energy rich compounds and their biological significance, Biological oxidation, Mitochondrial Electron transport, Oxidative phosphorylation and ATP synthesis, Chemiosmotic theory. **Metabolic Cycles and Energy Production:** Glycolysis – A central pathway of glucose catabolism, TCA cycle and its significance, Hexose – Mono-phosphate shunt, Fatty acid oxidation, ketone bodies, ketosis and metabolism of ketone bodies, Glycogenolysis, Glycerol metabolism

Unit: 3 Glycogenesis and Protein Metabolisms

Glycogenesis, Gluconeogenesis, Regulation of carbohydrate metabolism, Biosynthesis of fatty acids, Interrlationship between carbohydrate and lipid metabolism, Cholesterol synthesis and degradation. **Protein Metabolisms:** Deamination, transamination, decarboxylation, Urea cycle

Unit: 4 : General characteristics of hormones

Chemistry and function of hormones, hormone receptors and hormone action, Hormonal control of cellular metabolism.

Unit: 5 Nucleic acids structure and function

Purine and pyrimidine derivatives, Nucleosides, nucleotides and internucleotide linkages
Chemical nature of DNA and RNA, Biological functions of nucleic acids

References Books:

1. Biochemistry - L.Stryer
2. Principles of Biochemistry - A.L.Lehninger
3. Concepts in Biochemistry - Conn & Stumpf
4. Principles of Biochemistry - E.L.Smith, R.L.Hill et al
Vol. I & II (7th Edn.)
5. Harper's Biochemistry - Murray, R.K., Granner, D.K.,
Mayes, P.A. & Rodwell, V.W.

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MASTERS OF PHILOSOPHY (BIOCHEMISTRY)
PAPER-IV**

INDUSTRIAL BIOTECHNOLOGY

UNIT I INTRODUCTION TO INDUSTRIAL BIOPROCESS

A historical overview of industrial fermentation process – traditional and modern biotechnology. A brief survey of organisms, processes, products relating to modern biotechnology. Process flow sheeting – block diagrams, pictorial representation.

UNIT II PRODUCTION OF PRIMARY METABOLITES

A brief outline of processes for the production of some commercially important organic acids (e.g. citric acid, lactic acid, acetic acid etc.); amino acids (glutamic acid, phenylalanine, aspartic acid etc.) and alcohols (ethanol, butanol etc.)

UNIT III PRODUCTION OF SECONDARY METABOLITES

Study of production processes for various classes of secondary metabolites: antibiotics: beta-lactams (penicillin, cephalosporin etc.), aminoglycosides (streptomycin etc.), macrolides (erythromycin), vitamins and steroids.

UNIT IV PRODUCTION OF ENZYMES AND OTHER BIOPRODUCTS

Production of industrial enzymes such as proteases, amylases, lipases, cellulases etc., Production of biopesticides, biofertilisers, biopreservatives (Nisin), cheese, biopolymers (xanthan gum, PHB etc.), single cell protein.

UNIT V PRODUCTION MODERN BIOTECHNOLOGY PRODUCTS

Production of recombinant proteins having therapeutic and diagnostic applications, production of vaccines. Production of monoclonal antibodies. Products of plant and animal cell culture

1. Wulf Cruger and Anneliese Crueger, "Biotechnology: A Textbook of Industrial Microbiology", Panima Publishing Corporation.
2. Murrey Moo & Young, "Comprehensive Biotechnology", Pergamon.
Casida Jr, L.E., "Industrial Microbiology", New Age International (P) Ltd.
3. Prescott, Dunn, "Industrial Microbiology", Agrobios (India).

SYLLABUS
MASTERS OF PHILOSOPHY (Bioinformatics)
PAPER-III

**BIOLOGICAL DATABASES, DATA MINING AND MICRO
ARRAYS**

UNIT-I

Biological database - Sequence databases - Other specialized databases – Microarray databases - Database browsers and search engines.

UNIT-II

Data mining definition – Classification and clustering of data – Association rules – Data visualization.

UNIT-III

Introduction to Micoarrys - Oligonucleotide and Spotted cDNA arrays - Design considerations for microarray experiments – Goals of a microarray experiment.

UNIT-IV

Basic research with DNA microarrays – Micorarrays and Cancer - Myeloid leukemia (AML) vs. acute lymphoblastic leukemia (ALL) data analysis.

UNIT-V

Use of array analysis programs – SAM - TIGR programs – MEV.

Books for References

1. Analysis of DNA Microarray Data by Steen Knudsen.
2. Discovering Genomics, Proteomics, and Bioinformatics by A.M. Campbell and L.J. Heyer.

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MASTERS OF PHILOSOPHY (Bioinformatics)
PAPER-IV
STRUCTURAL BIOINFORMATICS

Unit I:

Structural features of biomolecules – techniques used to determine the structure of biomolecules - geometrical parameters – potential energy surfaces – molecular graphics – hardware and software requirements – Internet – mathematical concepts, molecular file formats

Unit II:

Structure prediction – secondary structure – homology modeling, fold recognition and ab initio 3D structure prediction – structure comparison and alignment – prediction of function from structure.

Unit III:

Molecular dynamic using simple models – simulations with continuous potentials – advantage of constant temperature and pressure simulation – solvent effects – analysis of conformational changes during molecular dynamic simulation.

Unit IV:

Molecular docking – structure based drug design – de novo approach – molecular similarity – quantitative structure-activity relationship – 3D pharmacophore derivation and matching – importance of molecular modeling in drug discovery, Cheminformatics and its applications, Combinatorial libraries and Chemical diversity

Unit V:

Protein stability and folding-SCOP-DALI-assignment of protein structures to genomes-determining gene function through conserved protein structure-prediction of protein function-approaches to protein structural genomics

RECOMMENDED TEXTS:

1. Lesk, A.M. (2002).” **Introduction to Bioinformatics**”, 1st Edition, Oxford University Press, Oxford, UK.

REFERENCE BOOKS:

1. Mount, D.W. (2001).” **Bioinformatics – Sequence and Genome Analysis**”, 1st Edition, Cold Spring Harbor Laboratory Press, New York, USA.
2. Westhead, D.R., Parish, J.H. and Twyman, R.M. (2003). **Instant Notes Series – Bioinformatics**, 1st Edition, Viva Books Private Limited, New Delhi, India.
3. Ignacimuthu (s.j.), S. (2005). **Basic Bioinformatics**, 1st Edition, Narosa Publishing House, New Delhi, India.

SYLLABUS
MASTERS OF PHILOSOPHY (Biotechnology)
PAPER-III

APPLIED BIOTECHNOLOGY

UNIT-I:

Industrial Biotechnology: Microbial strain of industrial importance, microbial production of antibiotics (penicillin , streptomycin & tetracycline), Vitamins (Vit B12), amino acids (glutamic acid) & enzymes (amylase, protease, invertase & pectinase), microbial production of alcoholic beverages (whisky & brandy), vinegar, citric acid, acetic acid, glycerol, acetone, foods–SCP, Biotransformation of steroids and pesticides.

UNIT-II:

Agricultural Biotechnology: Role of biofertilizers and biopesticides in sustainable development, petrocrops, aquaculture, Improvement of nutritional value of seed storage protein, starch, oil. Transgenic plants for increased shelf life molecular mapping of genes of agricultural importance, sericulture, transgenic fish Plant Variety Protection Act, Plant breeders rights, International Convention on biological diversity.

UNIT-III:

Food Biotechnology: Prokaryotic & Eukaryotic based products (fermented meats, milk products , yoghurt, cheese, cereal, wine, beer), Impact of biotechnology on microbial testing of food, current/traditional methodology and new approaches (use of gene probes, RDT, Bioluminescence), Safety evaluation of genetically engineered enzyme/novel food products, Natural Control of Micro Organism and preservation, Biogums, Bio-colours Fumaric acid, sweetener, fat substitutes, natural & modified starch, fats & oils food.

UNIT-IV:

Environmental Biotechnology: Environmental pollution and their management, concept of Global Warming and Ozone depletion (Ecofarming, Green house effect & acid rain), Waste water treatment, solid waste management, conventional & modern fuels & their environmental impact, Bioremediation, Biodegradation of xenobiotic compounds, Biomineralization, Biotechnological approaches for

preserving biodiversity (Gene banks ,Germ Plasm Banks & their management).

UNIT-V:

Frontiers in Biotechnology: Stem Cell Technology, Human Cloning Ethical issues & risks associated with it, Nano biotechnology:– Introduction to nanoscience, size matter, tools for measuring nanostructure Biosencer development and application, Nanofabrication, Nanotech impact on types of DNA chips & their production, SNP and genome mismatch signals, functional proteomics – RT PCR Human Genome Project , Bioterrorism.

RECOMMENDED BOOKS:

1. Fundamental of food Biotechnology (1996). Lee, B.H.
2. Biotechnology & Food Ingredients (1991) Goldberg, I & Williams, R.
3. Food Biotechnology: Micro Organisms (1995) Hui, Y.H.
4. Biotechnology: Food Fermentation Vol. I & II (1999), Joshi, V.K. & Pandey, A.
5. Pesticide Microbiology, Hill I.R. & Asight, S.J.L.
6. Biotech in Industrial Waste treatment & Bioremediation (1996) Hickey, R.F. Smith, G.

SYLLABUS
MASTERS OF PHILOSOPHY (BIOTECHNOLOGY)
PAPER-IV

NEW TRENDS IN BIOTECHNOLOGY

Unit I

- Genome & Genomics: Concept and methods of genome analysis, genome projects.
- Transcriptome & Transcriptomics: Concept and methods
- Proteome & Proteomics: Concept and methods of Proteome analysis
- Metabolome & Metabolomics

Unit II

- Stem Cell technology: Types of stem cells
- Manipulations of stem cells and applications in medicine
- In vitro fertilization: Principle, methods, applications and ethics.
- Cloning of animals: Methods and applications.

Unit III

- Nano biotechnology: Introduction, Biomaterials and biological materials-examples and uses
- DNA nanotechnology-structural DNA assembly-Nanopore and
- Nanoparticles-biological arrays- nanoprobes for analytical applications
- Nano biosensors-nanoscale organization-characterization-quantum size effects-sensors of the future.
- Tools for measuring nanostructures. Microscopies-SEM-TEM-AFM modern advancesmicroanalysis-optical detection of single molecules

Unit IV

- Microarray chips: Concept, design of biochip, types of DNA chips

- Gene Therapy for Human Diseases.
- Protein Crystallization; Theory and methods: API Electro spray and MALDI-TOF.
- SNP's and GMS (Genome mismatch Signals)

Unit V

- Biosensors: Concept, principle, Organization of biosensors & types
- Biosensors: Health & Medicine
- Biosensors: Food technology, Environment monitoring
- Bacterial biosensors; Array Biosensors

Reference

Books

1. DNA Microarrays and gene expression by **P. Baldi & GW Hatfield**
2. Protein – Protein Interactions by **Erica Golemis**
3. A passion for DNA (Genesm genomes and Society) By **JD Watson**
4. Modern Genetic analysis by **Anthony JF Griffiths et al.**
5. Nan biotechnology- next big idea by **Mark, Ratner Daniel Ratner**
6. Gene cloning by **TA Brown**
7. Latest information on academic Web sites

SYLLABUS
MASTERS OF PHILOSOPHY (Computer Science & Technology)
PAPER-III

DATABASE MANAGEMENT SYSTEM

UNIT 1: Database System Concept

Evolution, Concepts of redundancy and dependence in flat file systems, DBMS solution, Data independence, Data integrity and security, Components of a typical database management system

UNIT 2: Database Technologies

Technologies: Hierarchical Model, Network Model, Relational Model, Object model, Single user Database System, Multi-user and enterprise wide database applications, Two and three-tier client-server, Internet/ intranet architectures, Support for complex data types e.g. graphical, multi-media

UNIT 3: Normalization for Relational Databases

Informal Design Guidelines for Relational Schemas, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multi-valued Dependencies and Fourth Normal Forms, Join Dependencies and Fifth Normal Forms

UNIT 4: Database Administrative Tasks

Various Database Administrator's (DBA) functions, DBA's role, Creation and management of databases and users, Use of views, SQL support for DBA functions

UNIT 5: Database Security

Introduction to Database Security Issues, Levels of authority, Access rites, Service levels, Recovery Concepts, Recovery Techniques, Back-up procedures,

Database Integrity And Performance

Integrity: insert, update and deletion anomalies, Entity and Referential integrity, Database design including integrity constraints, SQL support for integrity constraints,
Performance: Performance criteria, Storage and access methods, Use of indexes, B-trees

Query optimizers, Costs of improved performance, Language support for optimizing performance

Multi-user Environment

Concurrency:

Introduction to Transaction Processing

Properties of Transactions, Concurrency issues, Atomicity, consistency, independence and durability (ACID) principles locking: Loss of integrity in concurrent systems

Lost updates, iii, Inconsistent analysis, Isolation levels, Locking mechanisms (including two-phase protocol)

Backup And Recovery

Backup and recovery: Use of log files, Checkpoints,

Time stamping, Rollback and recovery techniques, SQL support

Architecture- Distributed database concept, Data fragmentation, Replication and, Allocation Techniques for, Distributed Database Design, Types of Distributed Database Systems, An Overview of Client-Server Architecture and its Relationship, to Distributed Databases, Future Prospects of Client-Server Technology

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MASTERS OF PHILOSOPHY (Computer Science & Technology)
PAPER-IV

SYSTEM ANALYSIS & DESIGN

BLOCK - I

Unit 1: SDLC

System Development Life Cycle: Analysis, Design, Coding; Testing and Documentation.

Role in S/W Development

Prototyping; Role of System Analyst; Other Players of the System and their Functions.

System Planning

System Planning and Initial Investigation; Information Gathering.

Unit 2: Tools

Tools of Structured Analysis; Feasibility Study; Steps of Feasibility Study.

Cost / Benefit Analysis

Cost / Benefit Analysis; Process and Stages of System Design.

Prototypes

Input Design and Prototyping; Output Design and Prototyping.

Unit 3: Database Design

Introduction to Database Design; Properties.

Unit 4: Testing and Quality Assurance

Introduction to User Interface Design; Introduction to Testing and Quality Assurance;
Implementation and Software Maintenance.

Unit 5: Project Scheduling

Project Scheduling and Monitoring; User Training and Parallel Run; Introduction to Documentation.

H/W & S/W selection

Hardware / Software Selection; Security; Disaster; Recovery and Ethics; Object Oriented Analysis.

SUGGESTED READING:

1. Computer Systems Design and Architecture by Heuring Vincent P & Whitten Jeffrey, Publisher: Pearson Education Asia
2. Systems Analysis and Design Methods by Shelly Gary B, : Galgotia Publications
3. Systems Analysis and Design by Awad, Elias M. Publisher: Galgotia Publications

SYLLABUS
MASTERS OF PHILOSOPHY (Commerce)
PAPER-III

INTERNATIONAL TRADE

1. The Meaning of International Trade Finance Payment and Risk Management Services

1.1 The meaning of international trade finance. Types of customers in Tanzania and abroad including service companies, exporters, importers, merchants/traders and companies with domestic trade and overseas representation; their needs and the opportunities to banks and other sources that these present.

1.2 Advantages and disadvantages of settlement in foreign currencies. Rates of exchange. Factors which affect the movement of rates. Protection against exchange risks. Mechanics of forward contracts. The utilisation of foreign currency accounts for matching foreign currency positions. Foreign currency borrowing/deposits and pure currency options (in general terms only).
Eurocurrency rates. The European Monetary System (EMS); the Exchange Rate Mechanism (ERM); the European Currency Unit (ECU). The implications of European Monetary Union (EMU) and a single currency.

2 Payment, settlement and clearing systems in shilling and foreign currency, including CHAPS. Electronic banking systems necessary to provide international trade finance to customers.

International payments systems: cheques, drafts, mail and telegraphic payment orders (including express money transfers), SWIFT and International Money Orders; nostro and vostro accounts and procedures (in general terms).

Electronic banking services including giro and credit cards and means of making regular payments.

Regulations to prevent fraud and money laundering.

Payment and collection services available from banks abroad.

Commercial terms, including INCOTERMS, used in the delivery of goods and for payments in domestic and international trade; responsibilities of the parties involved.

Types and uses of bills of exchange; features and functions of basic shipping, transport and insurance documents used in international trade. Control and transfer of ownership of goods and insurance. Implications of Electronic Data Interchange (EDI).

Risks inherent in granting periods of credit in connection with trade dependent on the particular terms of payment, including open account trading.

Protection against credit, political and economic risks by means of private insurance.

Bank undertakings as a means of securing and obtaining payment, including documentary letters of credit, guarantees, standby letters of credit and guaranteed bills of exchange.

3 Collection of cheques and bills of exchange, both clean and documentary. Terminology and procedures. The role of banks (a detailed knowledge of Uniform Rules for Collections and the relevant features of the Bills of Exchange Act).

The main types of documentary letters of credit and their documentary requirements and operation. Liabilities and responsibilities of banks (a detailed knowledge of Uniform Customs and practice for Documentary Credits is expected).

4 Financial Services

Documentary letters of credit as a means of obtaining finance or providing credit; the financial uses of credits including acceptance/deferred payment credits, discounting and forfeiting; red clause letter of credit, transferable and back-to-back credits, revolving and reinstatement letters of credit.

5 The different types of short-term export finance, including overdrafts and loans, taking into account security considerations and recourse.

The provision of pre-shipment finance by banks against acceptable bills of exchange, letters of credit or commercial contracts.

Short-term export finance utilising the benefits of credit insurance policies in favour of banks. Assignment and management policies.

Foreign cheques, domestic or foreign bills of exchange, negotiation, advances and discounting; liabilities of parties involved.

Bills of exchange guaranteed by banks by means of avalisation or alternatively bank acceptances. Discounting and forfeiting arrangements.

Other forms of short-term financing from banks and other sources, including the banks'

SYLLABUS
MASTERS OF PHILOSOPHY (Commerce)
PAPER-IV

FINANCIAL ANALYSIS

UNIT 1:-

Capital expenditure analysis:

- a) Project evaluation traditional methods.
- b) Analysis of Non-financial aspects of project SCBA.

UNIT II:-

Capital budgeting under conditions of risk and uncertainty - the shackle approach, Hiller's Model, Abandonment value in capital budgeting, Utility theory and capital budgeting , Goal Programming.

UNIT III:-

Capital market financing and risk management

- a) Long term financing – capital structure decisions, term loans and bank credit.
- b) Equity stock financing, preferred stock financing, debenture financing.

UNIT IV:-

Forms up corporate financing:

- a) Trade credit, lease financing, venture capital, factoring.
- b) Commercial papers, certificate of deposits.
- c) Privatization.

UNIT V:-

Corporate restructuring:-

- a) Acquisition
- b) Divestitures / Sell off
- c) Mergers / takeover

BOOKS RECOMMENDED:

- | | | | |
|----|----------------------|---|--|
| 1. | Bhalla, VK | – | Financial Management and policy. |
| 2. | Vanhome | – | Financial Management and Policy. |
| 3. | J. Hampton | – | Financial decision making |
| 4. | Levy H and Sarnet H. | – | Capital investment and Financial Management. |

SYLLABUS
MASTERS OF PHILOSOPHY (Chemistry)
PAPER-III

PHYSICAL CHEMISTRY

Unit 1: Gaseous States

Maxwell's distribution of velocities and energies (derivation excluded) Calculation of root mean square velocity, average velocity and most probable velocity. Collision diameter, collision number, collision frequency and mean free path. Deviation of Real gases from ideal behaviour. Derivation of Vander Waal's Equation of State, its application in the calculation of Boyle's temperature (compression factor) Explanation of behaviour of real gases using Vander Waal's equation.

Unit 2: Critical Phenomenon

Critical temperature, Critical pressure, critical volume and their determination. PV isotherms of real gases, continuity of states, the isotherms of Vander Waal's equation, relationship between critical constants and Vander Waal's constants. Critical compressibility factor. The Law of corresponding states. Lequifaction of gases.

Unit 3: Liquid States

Structure of liquids. Properties of liquids – surface tension, viscosity vapour pressure and optical rotations and their determination.

Unit 4: Solid State

Classification of solids, Laws of crystallography – (i) Law of constancy of interfacial angles (ii) Law of rationality of indices (iii) Law of symmetry. Symmetry elements of crystals. Definition of unit cell & space lattice. Bravais lattices, crystal system. X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure of NaCl, KCl.

Unit 5: Liquid crystals

Difference between solids, liquids and liquid crystals, types of liquid crystals. Applications of liquid crystals.

SYLLABUS
MASTERS OF PHILOSOPHY (Chemistry)
PAPER-IV

ORGANIC CHEMISTRY

Section 1.01 Unit 1: Structure and Bonding

Section 1.02

Localized and delocalized chemical bond, van der Waals interactions, resonance: conditions, resonance effect and its applications, hyperconjugation, inductive effect, Electromeric effect & their comparison.

Unit 2: Stereochemistry of Organic Compounds

Concept of isomerism. Types of isomerism. Optical isomerism — elements of symmetry, molecular chirality, enantiomers, stereogenic centre, optical activity, properties of enantiomers, chiral and achiral molecules with two stereogenic centres, diastereomers, threo and erythro diastereomers, meso compounds, resolution of enantiomers, inversion, retention and racemization. Relative and absolute configuration, sequence rules, R & S systems of nomenclature. Geometric isomerism — determination of configuration of geometric isomers. E & Z system of nomenclature, Conformational isomerism — conformational analysis of ethane and n-butane, conformations of cyclohexane, axial and equatorial bonds, Newman projection and Sawhorse formulae, Difference between configuration and conformation.

Unit 3: Mechanism of Organic Reactions

Curved arrow notation, drawing electron movements with arrows, half-headed and double-headed arrows, homolytic and heterolytic bond breaking. Types of reagents — electrophiles and nucleophiles. Types of organic reactions. Energy considerations. Reactive intermediates — carbocations, carbanions, free radicals, carbenes, (formation, structure & stability).

Unit 4: Alkanes and Cycloalkanes

IUPAC nomenclature of branched and unbranched alkanes, the alkyl group, classification of carbon atoms in alkanes. Isomerism in alkanes, sources, methods of formation (with special reference to Wurtz reaction, Kolbe reaction, Corey House reaction and decarboxylation of carboxylic acids), physical properties. Mechanism of free radical halogenation of alkanes: reactivity and selectivity. Cycloalkanes — nomenclature, synthesis of cycloalkanes and their derivatives — photochemical (2+2) cycloaddition reactions, dehalogenation of α,ω -dihalides, pyrolysis of calcium or barium salts of dicarboxylic acids, Baeyer's strain theory and its limitations, theory of strainless rings.

Unit 5: Dienes and Alkynes

Nomenclature and classification of dienes: isolated, conjugated and cumulated dienes. Structure of butadiene,. Chemical reactions — 1,2 and 1,4 additions (Electrophilic & free radical mechanism), Diels-Alder reaction, Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation of alkynes,

SYLLABUS

MASTERS OF PHILOSOPHY (Education)
PAPER-III
COMPARATIVE EDUCATION

COURSE CONTENTS:

UNIT I : Comparative Education :

1. Meaning in terms of looking at it as a new discipline.
2. Scope and major concepts of comparative education.
3. Methods
4. Democracy and Nationalism
5. Area Study

UNIT II : Factors & Approaches :

1. Comparative education, factors and approaches geographical, economic, cultural, philosophical, sociological, linguistic, scientific, historical, ecological, structural.
2. Factors related to – Cross disciplinary approach used in comparative education.

UNIT III : Modern Trends & UNO :

- 1) Modern trends in world education – national and global.
- 2) Role of UNO in improving educational opportunities among the member countries, various official organs of the UNO and their educational activities.

UNIT IV : Comparative Study :

- 1) A comparative study of the educational systems of countries with special reference to:
Primary Education USA,
UK, Russia, India
Secondary Education USA,
UK, Russia, India.
Higher Education USA,
UK, Russia, India.
Teacher Education USA,
UK, Russia, India.

UNIT V : Problems of Education

1. Problems prevailing in developing countries with special reference to India, their causes and solution through education.
2. Poverty
3. Unemployment
4. Population explosion
5. Gender Sensitisation.
6. Political instability.

SYLLABUS
MASTERS OF PHILOSOPHY (Education)
PAPER-IV

EDUCATIONAL ADMINISTRATION & MANAGEMENT

UNIT I : Educational Administration – an introduction

1. Educational Administration : Meaning, Nature and Status
2. Scope and Function of Educational Administration
3. Organisations : Nature and characteristics of an organisation
4. Organisational Climate : its meaning, Nature and Types.

UNIT II : Development of modern concept of Educational administration

1. Historical development of Educational Administration
2. Administrative Body and its Functions.
3. Specific Trends in Educational Administration : Such as decision making and organizational compliance.

UNIT III : Leadership in Educational Organization

1. Meaning : Concept and Nature of Leadership
2. Theories of Leadership
3. Criteria of a good leader.

UNIT IV : Educational Planning

1. Meaning and Nature of Educational Planning
2. Need for Educational planning in India.
3. Characteristics of Educational Planning.
4. Principles of Modern Educational Planning.

UNIT V : Education as supervision¹.

- Meaning and nature of supervision.
2. Scope and Function of Supervision.

**MASTERS OF PHILOSOPHY (Environmental Science)
PAPER-III**

ENVIRONMENTAL POLLUTION

UNIT- I

Structure of the atmosphere, Global and Microclimates, Sources and Classification of Air Pollutants. Transport and Diffusion of Pollutants. Plume behavior and stack dispersion, Reactions of hydroxyl radical with O₂, N₂, CO₂ and Oxides of Nitrogen, Sulphur and Carbon. Global Emission of Major Air Pollutants. Sinks of Air pollutants – Acid rain: Ozone depletion – Montreal protocol; global warming – Kyoto protocol; Gaseous pollution control measures; photo chemical smog; Automobile pollution in India; Zero emission standards; Noise pollution – Sensing, Measurement, Abatement measures. Air Protection Act. Noise Protection Act.

UNIT - II

Properties of water – Characteristics of water bodies; Heavy metals, Speciation and Complexation, water quality. Ground water pollution, Effluent standard, DO, BOD, COD, acidity, alkalinity, salinity, hardness; drinking water quality standards; Water pollution; Eutrophication, sources and sinks and classification of water pollutants, Global discharge of heavy metals into water bodies, Purification of water by adsorption, flocculation, ion exchange and reverse osmosis methods. Alternatives of end of pipe treatments – Green Science, Radioactive pollution, Thermal pollution, Water Protection Act.

UNIT - III

Soil pollution; Sources, sinks and broad classification, movement and sorption mechanisms of inorganic contaminants and their impacts on physio-chemical and biological properties of soil and plants, Sediment Pollution – Black carbon – formation and fate, Adsorbent for organics, Global discharge of heavy metals into soil, Soil pollution control measures. Environmental Protection act.

UNIT - IV

Hazardous Solid Wastes – Sources, Transport, Disposal, Hospital Wastes, Socio-economic Impact in Third World Country – Basal Convention of Hazardous Wastes.

UNIT V

Industrial Disaster and Pollution – Case studies-Chemical Industries – Pesticide Industries, Bhopal Disaster, Chernobyl accident, Love canal Disaster, Exxon Oil Disaster, Impact and Remedial Measures – Labeling – Laws and Regulations – Pollution Control Boards.

REFERENCE:

1. India Disasters Report: Towards a Policy Initiative, Parasuraman, S. and Unnikrishnana, P.V. (2000). Oxford University Press.

2. Disaster Management, (1994). Indu Prakash Rashtra Prahari Prakashan, Gaziabad.
3. Environmental Law and Policy in India, II Edition, Divan, S. and Rosencranz, A. (2001). Oxford University Press.
4. Pollution Control Legislation, Volume I and II, Tamil Nadu Pollution Control Board (1999). TNPC Board, Chennai.
5. Limnology, Charles Goldman and Alexander J.Horne (1983) Mc Graw Hill.
6. An Introduction to Soils and Plant Growth, 5th Ed, Roy I Donalue, Raymond W Miller and John C Shiekluna (1987) Prentice Hall of India.
7. Textbook of Soil Science, 4th Ed., Biswar, T.D and Mukherjee,S.K (1987) Mc Graw Hill
8. Encyclopedia of Environmental Pollution and Control, Trivedy,R.K (1994) Enviromedia Publications, Karad.

SYLLABUS
MASTERS OF PHILOSOPHY (Environmental Science)

PAPER-IV

ENVIRONMENTAL MANAGEMENT AND SUSTAINABLE DEVELOPMENT

UNIT - I

Concept and scope of Environmental Management, Analysis and prediction of Environmental issues: Environmental Planning, Establishment of Health and Environmental standards, measuring Sustainable Development, Life Cycle Assessment, Material Flow Analysis, Environmental Auditing and Environmental Management Systems and Accounting for Eco-efficiency.

UNIT - II

Principles of Risk Assessment: Human Health Risk Assessments, Ecological Risk Assessment, Probabilistic Risk Assessments, Determination of acceptable risk based limits for Environmental chemicals and development of risk based remediation goals.

UNIT - III

The role of Risk Assessment in Environmental Management decisions: Evaluation of Human Health Risks Associated with airborne exposures to asbestos, a diagnostic human health risk assessment for a contaminated site problem and a risk based strategy for developing a corrective action, Response plan for petroleum – contaminated sites, Risk Management and Risk Communication.

UNIT - IV

Economics of Environmental Management, International Trade and its Environmental Integrity, Ecolabelling, responsible care, design for the Environment and full-cost accounting for municipal solid waste management, International Environmental Policy and Overview of Environmental Law in India.

UNIT - V

Environmental Education and Communication, Environmental Conflict Management, Sustainability of Water Resources, Sustainable Management of Forests, Sustainability in Industry, Ecosystem Management: Coastal Environments, River and Inland Water Environments, Wetlands, Desert margins, Rural and Urban Environments.

REFERENCE:

1. A Practical Guide to Understanding Management and Reviewing Environmental Risk Assessment Reports Sally L. Benjamin and David, A. Bullock, (2001) Lewis Publishers, Washington D.C
2. Hand Book of Environmental Risk Assessment and Management, Peter Calow (1998), Blackwell Swence, London.

3. Environmental Management in Practice, Volume – I to III Instruments for Environmental Management, Nath, B., Hens, L., Compton, P and D. Devuyst (1998), Routledge, London and New York.
4. Risk based analysis for Environmental Managers, Kart A, Frantzen, (2001) Lewis Publishers Washington D.C.
5. Risk Assessment in Environmental Management, D. Kofi Asante – Duah, John Wiley and Sons, New York.

SYLLABUS
MASTERS OF PHILOSOPHY (English)
PAPER-III

MODERN AMERICAN FICTION

Theory of fiction w.s.r. to the following.

Form 20th century Literary criticism, ed. David Lodge, (longan)

1. Virginia Woolf "Modern Fiction"
2. D.H. Lawrence. "Why the Novel Matters.
3. Wayne Booth- "Objectivity in Fiction"
4. Alain Robbe Grillet – A future for the Novel.
5. Raymond Williams – Realism and the contemporary Novel
6. Malcolm Bradbury, "The novel and its poetics" Possibilities.(OUP).

Section –B

Faulkner ; The Sound & the Fury, Ralph Ellison : Invisible man., Philip Roth ; Portnoy's complaint, Curt Vonnegut, Jr. : Slaughterhouse-five.

Note:- there will be one compulsory question on the item (A) and four questions on items in (B) . the student will be required to attempt four questions in all including the one from section A and three from section B.

Suggested Reading:

- (i) Frederick Hoffman – The twenties (Eve Press 1965)
- (ii) John W. Aldridge - After the lost generation (Arer col Pubs. 1951)
- (iii) Ihab Hassan - Radical Innocence (Princeton Univ. Press, 1971)
- (iv) Ihab Hassan – the dismemberment of Orpheus. Toward a postmodern literature university of Wisconsin press, 1982)
- (v) Robert Scholes – the fabulators
- (vi) Marcuse Klein _After alienation(ayer co. pubs. 1964)
- (vii) Leslie Fiedler- Waiting for the End (Stein and Day)1970)
- (viii) Richard Poirier- A world Elsewhere
- (ix) Tony Tanner- City of words (Jonathan Cae1971)
- (x) Robert Scholes- Fabulation and metafiction.(university of Illinois press,1979)

SYLLABUS
MASTERS OF PHILOSOPHY (English)
PAPER-IV

MODERN BRITISH FICTION

Paper –II (B) Modern British fiction

Theory of fiction w.s.r. to the following.

1. Virginia Woolf- “Modern fiction’ included in twentieth century literary criticism,
2. D.H.Lawrence, “Why the novel Matters. Included in 20th century literary criticism ed, david lodge (Longman)
3. Wayne Booth- “Objectivity in Fiction” Included in 20th century literary criticism, ed. David lodge. (Longman)
4. Alain Robbe Grillet- A future for the Novel.
5. Raymond Williams – realism and the Contemporary Novel.
6. Malcolm Bradbury – “The novel and its Poetics” Possibilities(OUP).

Section -B

Iris Murdoch : The severed head, Muriel Spark: The Bachelors, Doris Lessig : Memoirs of a Survivor, Evelyb Waugh: Brideshead Revisited.

Note:- There will be two questions in section A and four questions with internal choice in Section B students will be required to attempt four questions in all, including one from section A and three from section B.

Suggested reading:-

- a) Bernard Beroonzi : The situation of the novel (univ.of Pettsburgh Press.)
- b) Anthon Burgess : The novel now (Norton)
- c) David Daiches : The novel and the modern world.
- d) Boris Ford (ed.) : Pelican guide to English literature, Penguin vol. 7 the Modern age.
- e) Allen Friedman : Turn of the novel (oxford)
- f) Richard Kostelanetz : On Cotemporary Literature (Avan Boks,)
- g) David Lodge : The novelist at the crossroads and essays o fiction & criticism (cornell Univ. Press)
- h) Univ. Press)
- i) Mark Shoker (ed.) : Contemporary British Novelists (Southern Illinois university Press)

SYLLABUS
MASTERS OF PHILOSOPHY (Economics)
PAPER-III

INDIAN ECONOMICS

Module 1: Resource Base and Structure of Indian Economy

Economic Geography of India – Basic features - Human Resource: Demographic features, extent of unemployment, poverty, and inequality: Recent trends and conceptual issues. HDI of India.- Trend in National Income and Per capita income. - Sectoral composition (output and employment) Primary, Secondary and Tertiary, Sectors.

Module 2: Agriculture

Trends and Composition of Output of major crops. - Trends in Investment, Credit and Agricultural Subsidy. - New Agricultural strategy of 1960s (Green Revolution) - Food security and PDS in India - Evaluating Land Reforms in India - New Agricultural Policy (In the context of liberalization.)

Module 3: Industry

Industrial structure in India: Traditional, SSI, Village, Cottage and Modern industries. - Industrial Policy Resolution in India till 1991 - New Industrial Policy and its, impacts.

Module 4: External Sector

Trends and composition of India's Imports - Trends and direction of India's Exports - EXIM Policy of India in relation to trade liberalization and its impacts-FDI, FII and MNCs in India - External Borrowing and BOP problem in India - International Institutions (IMF, WB, ADB, WTO) and the Indian Economy.

Reference:

1. Uma , Kapila, (2008), 'Indian Economy: Performance & Policies', 8th Ed. Academic Foundation, New Delhi
2. Prakash, B.A. (Ed.) (2009), 'Indian Economy Since 1991: Economic Reforms and Performance. Sage Publications new Delhi.
3. Bhalla, G.S. (2008) 'Indian Agriculture since Independence (2008), NBT. New Delhi
4. Amit Bhaduri, Development with Dignity. (2005) NBT New Delhi Additional Reading:
5. IC. Dhingra : Indian Economy Environment and policy – Sultan chant and sons.

SYLLABUS
MASTERS OF PHILOSOPHY (Economics)
PAPER-IV

INTERNATIONAL ECONOMICS

UNIT I

The Theoretical basis of Trade – Classical Theory – Adam Smith – Ricardo Mill – Neoclassical Theory – Haberler's Opportunity Cost – Trade in difference Curves – Upper Curves -; Modern Theory – Heckscher Olin Theorem; Factor Price – Price Equalization – Theorem Factor – Prices and Factor Reversals.

UNIT II

Economic Growth and Trade: Gains from Trade Hicks Model – Johnson's Model – Immiserizing Growth – Transport Cost – Monopoly and Dumping – Terms of Trade. Increase in Factor Endowments – Technical Progress and Trade Capital Movements and Growth.

UNIT III

Trade Policy : Tariff – Quotas – Theory of the second best Theory of the Customs Union Case for Protection – Regional Integration – EEC – Trade Problems of Developing Countries – GATT and Tokyo declarations VNCTAD ; Import Substitution and Export Promotion – New International Economic Order – North-South Dialogue – Foreign Aid.

UNIT IV

Balance of Payments :- Trade and National Income – Foreign Trade Multiplier – Market for Foreign Exchange – Purchasing Power Parity Theory – Fixed and Flexible Exchange Rates – Balance of Payments – Disequilibrium in the Balance of Payments and Adjustments – Mechanism Devaluation – Elasticity Approach – Income Absorption Approach – Monetary Approach – Exchange Control – Means of Achieving – External and Internal Equilibrium – Fiscal Monetary Mize.

UNIT V

International Monetary Systems:- Problems of International Monetary Systems - International Liquidity – IMF – SDR – Euro Dollar Market – Plans for Reform and Future – of the International Monetary System.

SYLLABUS
MASTERS OF PHILOSOPHY (Geography)
PAPER-III

GIS AND REMOTE SENSING

GIS

Unit-I

Concepts and Definitions:

- Geographic Information Systems (GIS): Definition and developments
- Spatial data base: Points, Lines and Polygons
- Computer components: Hardware and software

Functional Elements:

- Data acquisition, input, editing, data manipulation and topology creation
- Data analysis and query
- Symbolisation and product generation

Unit-II

Data Management and Structure:

- Data Base Management System (DBMS): Purpose and structure
- Classification: Raster, Vector, quadtree, hierarchical, network and relational

Artificial Intelligence and Neural Networks:

- Artificial intelligence: history, major issues, approaches and pattern recognition.
- Artificial neural network: Definition, taxonomy and multi-layer perceptions

Remote Sensing

Unit-III

Introduction to remote sensing: Energy and radiation principles, energy-atmosphere interaction, energy-earth surface features interaction, spectral signatures.

Resolution of Remote Sensing data: Spatial, spectral, radiometric and temporal.

Unit-II

Remote sensing types: Natural, technology assisted, active, passive, photographic, nonphotographic, etc.

Type of aerial photographs and satellite imageries: Classification, characteristics and applications.

Sensor Platforms: Ground based, air borne and space borne, earth resources satellite systems: LANDSAT, SPOT, IRS, ERS, IKONOS, etc.

Unit-IV

Image errors due to tilt, relief, optical distortions, image restoration and rectification.

Photogrammetry: Simple geometry of vertical photograph measurement of scale, height, and slope from the vertical photographs.

Unit-V

Digital image processing: Introduction to image processing system: hardware and software. GPS and its use in the selection of training sets and field verification of interpreted data.

BOOKS RECOMMENDED

ESSENTIAL READINGS

Aronoff, S. : *Geographic Information Systems: A Management Perspective*, WDL Publications Ottawa, Canada, 1992.

ESRI : *Understanding GIS*, Environmental Systems Research Institute, U.S.A., 1993.

Jeffrey S. & John, E. : *Geographic Information Systems - An Introduction*, Prentice Hall, New Jersey, USA, 1990.

Michael F. Goodchild : *Introduction to GIS*, Santa Barbara, California, & Karan K. Kemp (eds.) NGGIA, 1990.

American Society : *Manual of Remote Sensing*, Vol. 1 and II, Falls Church, of Photogrammetry Virginia, 1975.

Barret, E.C. & Curtis, E.F. : *Remote Sensing of Environment*, Second Edition, 1982.

Curran, Paul J. : *Principles of Remote Sensing*, Longman, Hongkong, 1988.

Jensen, J.R. : *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall, New Jersey, 1986.

SYLLABUS MASTERS OF PHILOSOPHY (Geography) PAPER-IV ENVIRONMENT GEOGRAPHY

Unit-I Climatic and Biotic Hazards

1. Concept of hazards and disaster. Natural gmsi- natural and man-made hazards
2. Seasonal Climatic hazards: Flood, and drought- mechanism, environmental impact and management
3. Occasional climatic hazards: Hailstones and tornadoes- mechanism, environmental impact and management

4. Biotic hazards: Deforestation and loss of bio-diversity-impact and conservation of biotic resources

Unit- II Other Terrestrial Hazards in the Indian Sub-continent

1. Edaphic hazards: Salinization and Desertification- Mechanism, impact and management
2. Geomorphic hazards: Landslide, River bank erosion and Coastal erosion—mechanism, impact and management
3. Tectonic hazards: Earthquake—impact and precautionary measures
4. Water related hazards: Contamination of ground water and fall of piezometric level

Unit- III Human Development in the Third World

1. Concept of development and under development: Basic indicators of economic development
2. Economic disparity as constraint of development: per capita income, purchasing power and standard of living
3. Poverty: Poverty line, Unemployment, Dependency ratio, Work participation and Poverty alleviation
4. Economic impact of globalization

Unit- IV Human Development in the Third World

1. Basic indicators of human and gender development
2. Social inequality as constraint of development: caste and religious fundamentalism; gender bias
3. Demographic constraint; Population growth. Malnutrition. Food security and Hunger. Morbidity and Mortality
4. Sustainable development
5. Figures in the parentheses indicate number classes required

Unit- V

1. Environment-development debate: Environmental movements: Chipko, Silent valley & Narmada Bachao Andolan.
2. Environmental ethics; Concept of Sustainable Development.

**SYLLABUS
MASTERS OF PHILOSOPHY (BENGALI)
PAPER-III**

**HISTORY OF BENGALI LITERATURE FROM BHART CHANDRA
TO MODERN TIMES**

First Half: History of Bengali Literature up to Bhart Chandra

Recommended Books:-

1. Bangla Sahityer Itihas (part 1 & part 11) Dr. Sukumer Sen
2. Bangla Sahityer Itibritya (part I,.II & III) Dr. Asit Kumar
. Bandopadhaya.

Second Half: History of Bengali Literature (up to the Modern times)

Recommended Books:-

1. Bangali Sahityer Itihas (part 111 & 1V) Dr. Sukumer Sen.
- 2 Bangla Sahityer Itibritya (part 1V,V & V1)

History of Bengali Languages

Text Book: Bhaser Itibritya - Sukumer Sen.-2-

Recommended Books:-

1. Origin and Development of Bengali Languages- Suniti Kumar Chatterjee.
2. Sanskrit O Prakrit Bhasar Kramavikas- Paresh Chandra Majumdar.

Second Half:

Text Books:-

1. Charyapada Ed. By Manindra Mohan Basu (First ten Charge only).
- 2 Srikrishna Kirsten Ed. By Madan Mohan Kumar (Birara Khanda only).

Recommended Books:-

- 1.Srikrishna Kirtan- Tarapada Mukhopadhyay.
- 2.Origin and Development of old Bengali Texts- Tarapada Mukhopadhyay.
- 3.Madhyajuger Bharatiya Arya Bhasa O Sri Krishnan Kirtan by Krishnapada Go swami.

Middle Bengali Literatures

First Half: Vaisnav Literature

Text:

1. Vaisnav pada Sampat (complete)
Ed. by Dr Niranjan Chakravarti and Dr. Chitta Ranjan Laha.
2. Chaitanya Charitamrita (Adi Kanda)
Krishna Das Kaviraj.

Recommended Books:-

1. Samagra Padavali Sahitya Samgraha (part 1 & part11)Ed. By Niranjan Chakrabarty (Vidyapati and Govindasa only)
2. Chandiser Padavali Ed. by Biman Beheri Majumdar.
3. jnondaser Padavali Ed. by Biman Beheri Majumdar.
4. Shri Radhatatwa O Chaitanya Sanskrit- Janardan Chakrabarty .
5. Sri Radhar Kramvikash- Sashibhushan Das Gupta.
6. Vaishab Samaj, Sahitya O Sahskriti- Basanti Choudhary.
7. Sri Roop O Padavali Sahitya –Sukdev Sinha.
8. Nadhya Yuger Kavi O Kavya –Sankari Prasad Basu.

Second Half:

Text:

1. Chandi Mangal (Pt. 1) –Mukundaram
2. Sakta Pudavli (Published by C.U) A.K. Roy.
3. Unabimse statabdir Panchalika O Bengla Sahitya by Niranjana Chakrabarti.

First Half: Nineteenth Century Poetry

Text Books:-

1. Ishwar Gupter Kavitali.
2. Sarada Mangal –Bihari Lal.
3. Brajangana- Madhusudan Dutt.
4. Chaturdaspadi Kavitali- Madhusudan Dutt.

-4-

Recommended Books:-

1. Adhunik Bangla Kavya –Traapada Mukhopadhyay.
2. Unabimsa Stabdir Prathasardha O Bangla Sahitya- Ashit Kumar Bandopadhyay.
3. Kavi Sir madhusudan- Mohit Lal Majumdar.
4. Madhusudaner Kavi Manas O Kavyalankar- Siva Prasad Bhattacharya

Second Half: Origin and Development of Bengali Prose (up to Pranath Choudhary).

Students are required to know the history in detail with special reference to Tek Chand Thakur, Bankim Chandra and his Circle, Rabindranath and Prema tha Choudhary.

Recommended Books:-

1. Bangla Gadyer Kramavikas- Shyamal Kumar Chattopadhyay.
2. Bangla Gadya Sahityar Itihas Kant Das.
3. Bangla Gadya Itihas - Arun Kumar Mukhopadhyay.
4. Bangla Sahityar yugopriya Lekhak- Sabita Chattopadhyay.
5. Prama tha Choudhary- Jibendra Nath Sinha Roy.

**SYLLABUS
MASTERS OF PHILOSOPHY (BENGALI)
PAPER-IV**

POETRY OF TAGORE

Text Books:-

1. Manasi
2. Chitra.
3. Gitanjali
4. Punasdha.

Recommended Books:-

1. Rabindra Kavya Prabha-Pramatha Neth Bisi.
2. Rabindra Sristi Samiikkha(part 1 & part11) -Sri Kumar Bandopddhyay.
3. Rabindra Pradaksin. Moit Lal Majumdar.
4. Rabindra Sahityar Bhumika- Nihar Ranjn Roy.
5. Rabindra Kavaruper Vvartan Rekha –Gunamay Manna.
6. Kavi Manasi- Jagdish Chandra Bhattacharya.
7. Rabindra Pratibhar Parichay- Kasuei Ram Das.

Second Half: Tagore and his age.

Recommended Books:-

1. Bangla Sahityer Itihas(part 111 & part1V) -Sukmer Sen.
2. Rabindra Sahitya O Rabindra Yuger Itikatha- Bhudev Chuddar
3. Adhunik Bangla Kobita- Mohit Lal Majumdar.
4. Jatindra Nath- Sashi Bhushan Das Gupta.
5. Sahitya Charcha-Buddhadev Basu.
6. Adhunik Kobitar Itihas –Alok Ranjan Das Gupta and Devi Prasad Bandopadhyayut.

SYLLABUS
MASTERS OF PHILOSOPHY (LAW)
PAPER-III
ADMINISTRATIVE LAW

UNIT – I

Evolution- Nature and Scope of Administrative Law- Relation with Constitutional Law- Separation of powers and concepts- Rule of law- Council d' Eate, (French system) - Classification of Administration Action- functions- Administrative direction and discretion.

UNIT –II

Legislative power of the administration- Extent of delegation and control over delegated Legislation- Sub-delegation- Judicial- Parliamentary control over delegated Legislation.

UNIT - III

Judicial power of Administration- Nature of procedure- Principles of Natural justice- Effect of non-compliance with principles of Natural Justice- Exception to principles of Natural Justice.

UNIT – IV

Judicial control of Administrative action – Writs, Principles and Procedure - Public Law Review and Private Law Review of Administration action- Liability of State – Torts, Contract- Promissory Estoppel-Government Privileges- Right of information- Doctrine of Legitimate expectation- Doctrine of Accountability- Waiver- Doctrine of Proportionality.

UNIT –V

Corporations and Public undertaking- Commission of Enquiry- Ombudsman in India (Lokpal and Lokayuktha) - Central Vigilance Commission- Parliamentary Committees- Civil services in India- Accountability and responsibility- Problems and Prospectives- Administrative deviance- Corruption- Mal-administration- Control mechanism of Accountability.

Prescribed Books:

M. P. Jain & S. N. Jain - Principles of Administrative Law.

Reference Books:

Wade - Administrative Law.

De Smith - Judicial Review of Administrative Action.

S. P. Sathe - Administrative Law.

I. P. Massey - Administrative Law.

SYLLABUS MASTERS OF PHILOSOPHY (LAW) PAPER-IV

ENVIRONMENTAL LAW

UNIT – I

The Idea of Environment: Ancient and Medieval Writings, Traditions, Natural and Biological Sciences –Perspectives: Modern concept, Conflicting dimensions, recent issues -Environment and sustainable development - National and International Perspectives - Population and Development.

UNIT – II

Environmental Policy and Law: Environmental Policy : Pre & Post Independence Period; From Stockholm to Johannesburg Declaration (Rio) and Role of Government - Five year Plans - Forest Policy - Conservation strategy - Water Policy; Conservation of Natural Resources and its Management; Constitution and Environment: Right to Environment - Constitutional provisions on Environment and its Protection - Role of Judiciary on Environmental issues - Evolving of new Principles - Polluter pays principle - Precautionary principle - Public trust doctrine.

UNIT - III

International Law and Environmental Protection: International conventions in the development of Environmental Laws and its Policy - From Stockholm to recent conventions (Special Emphasis on Major conventions & Protocols) - Control on Marine Pollution; Common Law aspects of Environmental Protection; Remedies under other

Laws (I.P.C., Cr.P.C, C.P.C.) - Riparian rights and prior-appropriation.

UNIT – IV

Prevention and Control of Pollution: Pollution of Water, Sources, Legal Control, The Water Act, 1974 - Pollution of Air, Modalities of control, The Air Act, 1981 - Noise Pollution and its control, Noise Pollution control order - Disposal of Waste, laws on waste, disposal and its control - Trans-boundary Pollution hazards & Regulation; Biological Diversity and Legal Order: Bio-diversity and Legal regulation - Utilization of flora and fauna - Experimentation on animals - Legal and Ethical issues - Genetic Engineering - Wildlife Protection Act, 1972 - Forest Conservation Act, 1980 - Prevention of Cruelty against animals - Problems in Legal regulation of medicinal plants - The plant varieties Act - Wetland Conservation

UNIT - V

Environment Protection Act, 1986 including, Environment Protection Rules, Coastal Zone Regulation, ECO-Mark, Environment Impact Assessment, Environmental Audit, Public Participation in Environmental decision making, Environment information, public hearing, Regulation on Bio-Medical Waste.

Prescribed Books:

1. Armin Rosencranz - Environmental Law and Its Policy in India.
2. P. Leelakrishnan - Environmental Law in India /Cases.
3. Lal's commentaries on Water and Air Pollution laws along with Environment (Protection) Act and Rules, 1986.

SYLLABUS
MASTERS OF PHILOSOPHY (LIBRARY SCIENCE)
PAPER-III

LIBRARY ADMINISTRATION AND MANAGEMENT

Unit 1: The Librarian: Administrator

Meaning and definition of Administration, The Role of Librarian as an Administrator, The Librarian as an Executive, The Librarian as Diplomat, Education, Training and Experience of Librarian, Personal and Professional qualification of librarian.

Unit 2: The Librarian: Trustee

Functions of the Board, Functions of the Librarian, Constitution of the Board, Board Meetings, Committees, Minutes of Board meetings.

Unit 3: Finances

Support from public funds, The budget, Expenditures, Accounting, General fund account, Petty Cash Account, Budget Sheet, Payment of bills,

Unit 4: Purchase of Books and Supplies

Book Selection, Knowledge of the committee, Knowledge of the book market, Importation of Books, Economies of Book Buying, Pay Collection, Discards and Replacements, Magazines, Supplies.

Unit 5: Administration Organization

The librarian's office, Office equipments, Scheduling Work, Staff Organistion, Standards of service, salaries.

Reference Books:

1. MITTAL (R L). Library Administration: Theory & Practice. 5th Ed. Delhi: Metropolitan, 1984.
2. KRISHAN KUMAR. Library Administration and Management. 2nd ed. New Delhi: Vikas, 1987.
3. MOOKERJEE (Subodh Kumar) and SENGUPTA (Benoyendra). Library Organization and Library Administration. Calcutta: World Press, 1972.
4. RANGANATHAN(S R). Library Administration. 2nd ed. Bombay: Asia House, 1959.

SYLLABUS
MASTERS OF PHILOSOPHY (LIBRARY SCIENCE)
PAPER-IV
TYPES OF LIBRARIES

Unit 1: National Library

National Library- Its Role and functions with reference to the national library of India and Kolkata

Unit 2: Academic Libraries:

Schools, Colleges and universities: Their role and functions

Unit 3: Public and Special Libraries:

Public libraries: Role and its functions, the types of public it deals in.

Special Libraries: Role and its functions, the types of public it deals in

Unit 4: Libraries Professional Bodies and Associations

ILA, IASLIC, IFLA and FID.

Reference Books:

1. An Introduction to library and information Science by B S Aggarwal, ABD
2. Development of Libraries , Edited by S.R Sharma , Mohit , 1997.

**SYLLABUS
MASTERS OF PHILOSOPHY (MANAGEMENT)
PAPER-III**

**ORGANIZATIONAL BEHAVIOR AND MANAGEMENT
PROCESSES**

Unit 1: Introduction to Management

Nature and Scope; Historical Evolution of Management Thought; Approaches and Systems of Management; Social Responsibilities of Management; Case Study - Regarding Scope of Creativity.

Unit 2: Functions of Management

Planning: its Need, Principle, Types and Steps Involved; Managerial Decision Making: Types and Steps Involved in Decision Making Process; Organizational Design: Elements and Types; Staffing; Directing; Controlling Concepts.

Unit 3: Human Resource Management

Human Resource Planning; Recruitment, Selection and Socialization; Training and Development; Performance Appraisal.

Systems Approach to Management

Management Development; Scientific Management Approach; Fayol's Principles of Management; Behavioral Approach; Human Resources Perspective; Communication: Functions and Direction of Communication; Choice of Communication Channel.

Unit 4 Behavior of Individuals

Nature of Organizational Behavior; Learning: Basic Nature of Learning, Theories, Classical Conditioning, Reinforcement; Individuals and Physical Ability; Theories of Perception and Personality; Measures of Personality.

Motivation and Leadership

Introduction; Motivational Factors; Motivational Theories; Applications of Motivation in Organizations; Leadership and Approaches to Leadership; Management and Leadership.

Unit 5 Group Dynamics

Types of Groups; Group Structure; Groups and Teams; Stages of Group Development; Group Decision Making Techniques; Understanding Work Teams; Types of Teams; Group Dynamics and Organizational Politics.

Organizational Culture

Introduction; Nature and Functions of Organizational Culture; Cultural Control Mechanisms; Culture: Conceptual Framework.

Organizational Issues

Typology and Evolution of Organizational Culture; Forces and Key Roles; Behavioral Resistance to Change; Work Stress and Stress Management.

Suggested Reading:

1. Organizational Behavior by Stephen P. Robbins & Tim A. Judge, Publisher: Prentice Hall of India Private Limited
2. Organizational Behavior by Fred Luthans, Publisher: McGraw Hill
3. Organizational Behavior by Aswathappa K, Publisher: Himalaya Publishing House
4. Principles of Management by T. Ramasamy, Publisher: Himalaya Publishing House
5. Organizational Theory by Mary Jo Hatch, Publisher: Oxford University Press

**SYLLABUS
MASTERS OF PHILOSOPHY (MANAGEMENT)
PAPER-IV**

**HUMAN RESOURCE MANAGEMENT/ FINANCIAL
MANAGEMENT/ MARKETING MANAGEMENT/
INTERNATIONAL BUSINESS**

FINANCIAL MANAGEMENT

Unit 1: Overview

Introduction to Financial Management: Objectives of Financial Management, Functions of Financial Management; Financial Instruments: Equity Shares, Preference Shares, Right Issue; Debts: Debentures, Types of Debentures; Indian Financial System: Functions of Financial Market, Classification of Financial Markets, Efficiency of Financial System, Skeleton of the Financial System; Time Value of Money; Valuation of Bonds and Shares.

Comparative Statement: Importance of Financial Statement, Limitations, Constructing Comparative Statement; Common Size Statement: Advantages of Common Size Statement, Limitations of Common Size Statement, Constructing Common Size Statement; Trend Analysis: Advantages of Trend Percentages Analysis, Limitations of Trend Percentages Analysis, Method of Preparation of Trend Percentages, Precautions; Ratio Analysis: Importance, Limitations and Classification of Ratios.

Unit 2: Cash Flow

Fund Flow Statement: Objectives of Funds Flow Statement, Limitations, Preparation of Funds Flow Statement; Cash Flow Statement: Direct and Indirect Methods of Cash Flow.

Fixed Capital Analysis

Capital Budgeting: Features of Capital Budgeting, Importance of Capital Budgeting; Evaluations Techniques of Projects: Traditional Techniques: Pay Back Period, ARR, Time Adjusted Techniques: NPV, IRR, PI; Risk and Uncertainty in Capital Budgeting.

Capital Structure and Dividend Policy

Leverage Analysis: Operating Leverage, Financial Leverage, Combined Leverage; Capital Structure: Factors Determining the Capital Structure, Theories of Capital Structure; Cost of Capital: Significance of Cost of Capital, Computation of Cost of Capital, EPS, EBIT Analysis; Dividend Policy: Dividend Decision and Valuations of Firm, Determinants of Dividend Policy, Types of Dividend, Forms of Dividends, Bonus Issue.

Unit 3: Working Capital Analysis

Working Capital: Operating Cycle/Working Capital Cycle, Factors Effecting Working Capital, Importance of Adequate Working Capital, Financing of Working Capital, Determining Working Capital Financing Mix, Working Capital Analysis, Estimation of Working Capital Requirements; Receivables Management: Costs of Maintaining Receivables, Meaning and Definition of Receivables Management, Dimension of Receivables Management.

Unit 4: Inventory Management

Inventory Management: Meaning of Inventory, Purpose of Holding Inventory, Inventory Management, Objectives of Inventory Managements; Inventory Management Techniques.

Cash Management: Motives for Holding Cash, Cash Management, Managing Cash Flows; Cash Management Models.

Unit 5: Foreign Exchange Orientation

International Finance: Exchange Rate, Arbitrage Process as a Means of Attaining Equilibrium On Spot Markets, Arbitrage in Forward Market; Managing of Foreign Exchange Risk: Foreign Exchange Risk Management, Management of Economic Exposure, Management of Operating Exposure; Raising Foreign Currency Finance.

Suggested Reading:

1. Financial Management: Text and Problems by M Y Khan & P K Jain, Publisher: TMH, New Delhi.
2. Financial Management Theory & Practice by Prasanna Chandra, Publisher: TMH, New Delhi.
3. Financial Management by I M Pandey, Publisher: Vikas Publishing House, New Delhi.
4. Fundamentals of Financial Management by Van Horne, Publisher: Prentice Hall of India.
5. Advanced Accounting by Gupta R.L. and Radha Swamy M., Publisher: Sultan Chand & Sons, New Delhi.
6. Financial Management by Kishore R., Publisher: Taxman's Publishing House, New Delhi.

HUMAN RESOURCE MANAGEMENT

BLOCK I

Unit 1: Introduction to Human Resource Management

Introduction: Nature, Philosophy, Need, Objectives and Evolution of Human Resources Management; HRM Functions; HRD Concept; HRD Strategy; HR Responsibilities; Environmental Factors of HRM: Environmental Factors, Challenges to HRM.

Concepts and Process of Human Resource Planning

Human Resource Planning: Importance, Process, Barriers; Strategic Planning; Human Resource Information Systems (HRIS); Forecasting Demands: Forecasting Supply; Man Power Forecasting.

Unit 2: Emerging Trends in HRM

Outsourcing and its HR Dimensions; Human Resource Planning and Downsizing: Voluntary Redundancy and Ways of Downsizing Processing; Importance of Bench Marking; Case Study: Bench Marking VRS Practices and Compensation Management.

Job Analysis: Recruitment and Selection

Job Analysis: 6 Steps, Job Description vs. Job Specification, Methods of Collecting Job Analysis Information; Role of Recruitment and Selection: Situational Factors in

Recruitment, Recruitment Policy, External and Internal Sources of Recruiting and its Merits and Demerits, Selection Process and its Types; Structured Interview Guide.

Unit 3: Training and Development

Orientation; Training and Development; the Steps in Training Process; Career and Succession Planning: Career Stages, Career Development, Career Management Succession Planning; Case Discussion on Succession Planning.

Compensation

Introduction: Meaning, Objectives of Compensation; Components of Compensation System; Compensation Management Process; Factors of Determining Pay Rates; Pay Incentives; Employee Benefits and Services; Case Study: Comparing Industry Trends in Pay Rates such as FMCG.

Unit 4: Performance Appraisal

Introduction; Methods of Performance Appraisal; 360 Degree Feedback; Problems in Performance Appraisal; Potential Appraisal: Steps of Potential Appraisal; Case Study: Performance Appraisal Systems in Indian Banks.

Industrial Relations

Definition; Parties to Industrial Relations; Contemporary Issues; Industrial Disputes: Severity or Effects, Weapons used by Labor, Weapons used by Management, Causes, Measures to Improve Industrial Relations; Dispute Resolution: Preventive and Settlement of Industrial Disputes; Collective Bargaining.

Unit 5: Employee Empowerment

Worker's Participation in Management: Introduction, Scope, Significance; Trade Unions: Definition, Features, Objectives, Functions, Motivation to Join Unions; Employee Grievances: Identifying Grievances, Causes, Effects, Establishing Grievances Procedure, Guidelines for Effective Grievances Handling, Procedure.

Suggested Reading:

1. Human Resource Management by Dessler, Gary, Publisher: Pearson Education Asia, New Delhi.
2. Human Resource Management-Text & Cases, by Rao, V.S.P, Publisher: Excel Books, New Delhi.
3. Managing Human Resources by Ramaswamy, E., Publisher: Oxford University Press, New Delhi.
4. Human Resource Management by Irancevich, John, Publisher: McGraw Hill.
5. Managing Human Resources by Casio, Wayne F, Publisher: McGraw Hill Inc.
6. Essentials of Human Resource Management & Industrial Relations, Text, Cases & Games by Subba Rao. P, Publisher: Himalaya Publishing House, Mumbai.
7. Human Resource Management by Mondy R.W; Noe, R. M. Premeaux Sr. and Mondy J.B, Publisher: Prentice Hall Inc.
8. Human Resource Management by Saiyodain, Publisher: TMH, New Delhi.

9. Human Resource Management by Aswthappa, Publisher: TMH, New .Delhi

MARKETING MANAGEMENT

Unit 1: Concepts of Marketing Management

Definition and Concepts: Definitions of Marketing, Scope of Marketing; Core Marketing Concepts: Concept of Demand and Supply; Transaction; Major Marketing Management Philosophy; Social Marketing.

E-Business & Customer Satisfaction

E-Marketing: Marketing as Adapted to the New Economy; Components of E- Commerce (B2B and B2C); Web Marketing; Customer Satisfaction; Customer Relationship Management (CRM).

Unit 3: Marketing Opportunities Part - I

Strategic Planning: Business Mission, Concept of Strategic Business Units (SBU_s); Boston Consulting Group (BCG Model); Strength, Weakness, Opportunities & Threat (SWOT) Analysis.

Marketing Opportunities Part - II

Marketing Process; Marketing Plan; Marketing Intelligence System; Marketing Decision Support System; Marketing Research and its Process; Measurement of Market Demand.

Unit 3: Marketing Environment - Internal & External

Marketing Environment Forces; Macro Environment; Micro and Internal Environment; Factors Influencing Consumer Buyer Behavior; Buyer Decision Process; Inputs for Buying Decision Process; Consumer Trends; Market Segmentation Process.

Developing Market Strategies and the Offerings Part - I

Positioning and Differentiation: Concept, Positioning according to Ries and Trout, Various Tools of Differentiation; Product Decisions and Strategies; Product Mix; Product

Unit 4: Developing Market Strategies and the Offerings - Part II

Introduction to Service Marketing; Differentiating Services; Product and Service Price; Response to Change in Price; Pricing Strategies.

Delivering Marketing Programs – Part I

Marketing through Channel Partners; Wholesalers and Retailers: Current Trend; Channel Management.

Unit 5: Delivering Marketing Programs – Part II

Market Communication, Process for Effective Communication; Advertising; Different Advertising Media; Sales Promotion; Public Relations; Direct Marketing; Personal Selling: Concepts and Process; Management of Sales Force.

Suggested Reading

1. Marketing Management by Kotler Philip; Publisher: Prentice-Hall of India
2. Marketing Management by Ramaswamy V S and Namakumari; Publisher: S Macmillan India Ltd., 2002
3. Marketing Management by Saxena Rajan; Publisher: Tata McGraw-Hill, 2002)
4. Marketing in India Cases and Readings by Neelamegham S; Publisher: Vikas Publishing House Pvt. Ltd., 2002)
5. Majaro-The Essence of Marketing by Stokes David; Publisher: Prentice Hall of India, 2002
6. Marketing in the 21st Century by Evans R Joel and Berman Barry; Publisher: Gower Publications.
7. Customer Relationship Management in the New Era of Internet Marketing by Newell F- Loyalty; Publisher: McGraw-Hill Professional Publishing.

INTERNATIONAL BUSINESS

Unit 1: International Business

Introduction; Significance; Nature and Recent Trends; Features of International Business Environment; Culture Dynamics in Assessing Global Markets; International Political Spectrum and Management Decisions.

International Business Environment

Economic Classifications and Transformation Processes Affecting International Business; International Legal Environment; Emerging Markets & Strategic Implications; Technological and Demographic Environment.

Unit 2: Regionalism in International Operations

Intercontinental Trading Blocks: Policies, Motives, Trends, and Regional Statistics; Regionalism in South Asia: Need for Free Trade & Economic Integration: SAARC: Objectives, Integrated Program of Action (IPA); European Union: Structure, Single Market Aspect & its Expansion; North American Free Trade Organization.

Co-operative Business in International Operations

Regulations & Barrier to Free Trade; International Commodity Agreements: GSP & GSTP; GATT; WTO: Principles, Structure, Major Agreements, Conference & Third World Stand; Economic Integrators: IMF, World Bank, Asian Development Bank, UNCTAD, UNIDO.

Unit 3: Global Business Policy

Theories of Industrial Trade; International Investment Theories; Global Trade & Balance of Payments; Foreign Investments.

India in the Global Setting

Foreign Trade in India; EXIM Policy; Composition of Trade; Government Influence on Foreign Trade: Export Promotion Measures.

Unit 4: International Monetary System & Foreign Exchange Market

Introduction to International Monetary System & Foreign Exchange Market; Business Implications of Exchange Rate Movement; Foreign Exchange Management Act (FEMA); Internationalization of Stock Market.

Multinational Corporations

MNCs: Ownership Criteria, Market Imperfections; International Power; Micro-International; Dominance of MNCs; International Regulatory Structure; Ethics; Multinational Companies in India.

Unit 5: Globalization of World Economy

Introduction; International Forum of Globalization; Global Integration; the Demography of Globalization; Risk and Opportunities of Globalization; Commercial Diplomacy.

International Operations Management

Global Advertising & Promotion; Global Supply Chain Management; International Labor Management; Changing Profile of the Global Manager.

Suggested Reading:

1. International Business: Text and Cases by Francis Cherunilam, Publisher: Prentice Hall of India Private Limited, New Delhi
2. International Business by K. Aswathappa, Publisher: Tata McGraw Hill Publishing Company Limited. New Delhi
3. International Business by Charles W. L. Hill, Publisher: McGraw Hill/ Irwin Publication
4. International Business by Ball, Publisher: McGraw Hill
5. International Business by Joshi, Rakesh Mohan, Publisher: Oxford University Press
6. International Business by Paul Justin, Publisher: Prentice Hall of India
7. International Business by Shajahan, Publisher: Macmillan India

SYLLABUS
MASTERS OF PHILOSOPHY (MASS COMMUNICATION)
PAPER-III
MASS COMMUNICATION AND MEDIA

Unit 1: Concepts

Communication, Mass Communication, Media

Unit 2: Communication

Meaning, process, types (AV, Visual, Audio), approaches (horizontal-vertical-top down-bottom up- participatory, transmissional-semiological, scope (Intra,Inter,Group,Mass), elements (S,M,C,R,feedback), barriers, functions, models (SMR,SMCR,Shanon & Weaver, Lasswel, Osgood, Gerbner, New comb etc.), role

Unit 3: Mass Communication

Meaning, elements, role models (Defluer, Gerbner, Schramm, Westley & McCleans etc.), Technology in/of mass communication

Unit 4: Media

Meaning, types, functions, elements, Institution-textaudiences, Role of media in mass communication, Different media, their characteristics and use, Media creation-distribution-consumption technology

Unit 5: Historical perspective to Communication and Media

Evolution of communication: Theatre to Internet, Historical development of various media in India: Folk, media, Press, Cinema, Radio, Television, New media/Internet, Media regulation in India

Media and Society

Normative (Authoritarian, libertarian, social-responsibility, democratic participation), Sociological (cultivation, uses & gratification, agenda setting), Psychological (bullet, two step flow, personal influence) theories Media as cultural production, popular culture, mass culture Ownership patterns in Media and its implications Media audiences and its typologies

Issues

Representation, Persuasion, propaganda, ethics, social responsibility, censorship

SYLLABUS MASTERS OF PHILOSOPHY (MASS COMMUNICATION) PAPER-IV

PRINT MEDIA

Unit 1: Introduction to Writing

What is Writing? Concept of Writing; Philosophy; the act of Writing; Evolution of Writing; Different Aspects in the Evolution of Writing as Technology and as an Art; Writing for Media as an Art. Medium of Writing; the Write Spirit. **Writing for Print Media:** Types of print media, newspaper, magazines, books, loose media-leaflets/pamphlets/brochures/, Difference of style in writing, Editing and captioning for print media

Unit 2: Research: Sources of News Gathering

Primary Sources and Secondary Sources; Finding and using News Sources; Recognizing the Sources; Getting Acquainted; Sources of News; News Sources and Solutions; at the Scene; Making Phone Calls; Stringers; Tipsters; Employee Inputs; Eye Witnesses; Do Cameras Influence Eye Witnesses; Researching The Story: Press Officers; Spin-Doctors; Experts; Ordinary People; Reference Books and Archives; Contact Book; E-Mail; Newsgroups; News Agencies; Hard News and Soft News.

Unit 3: Grammar

Basic Grammar Skills: Verbs, Adverbs, Nouns, Pronouns, Conjunctions, and Interjections; Compound Words; Adjectives; Prepositions and Punctuation. Active and Passive; Compound and Complex Sentences. Use of Abbreviations; Synonym's; Antonyms; Phrases.

Unit 4: Writing Styles

The Importance of Style: an Overview; the Fog Index; Write the Way You Talk; Metaphors are More Fun; Clarity; a Personal Style; Write Better than You Talk; Write with Your Ears; Words and Phrases; Sentences and Paragraphs; Figures of Speech; House Style; Writing For Various Media; Writing for Print Media; Writing for Radio; Writing for Television; Writing for Web; Writing for Advertisements..

Unit 5: Types of Writing

Fiction and Non Fiction Writing; Tools for Non Fiction; Description; Interviews: Introduction, Why am I Interviewing? Who should I Interview? How Many Sources are Enough? When should I Interview? Where should I Interview? What should I Interview: How should I Interview; Taking Notes; Final Thoughts; Writing the Interview Story; Feature Writing: What is a Feature? Types of Feature, Structuring and Developing a Feature; Writing Subject Feature; Writing Controversial Feature; Writing Opinion Feature; Business Writing: Introduction; Who is the Audience? Headlines, Subheads, Executive Summary, PR Writing; Finding PR Gigs; Press Releases; Organizing the Information for Easy Writing.

Suggested Readings:

1. Media Writing Manual: Print, Broadcast and Public Relations, W. Richard, Whitaker, Janet E. Ramsey, Ronald D, Routledge.
2. Writing for the Media, F. Nel, Kerry Swift, Les Aupiais, Mail & Guardian.
3. Basic Media Writing, Melvin Mencher, McGraw Hill.
4. Writing for the Mass Media, James Glen Stovall, Prentice Hall.
5. Writing Space: The Computer Hypertext and the History of Writing; Botter .J. David; Lawrence Erlbaum Associates; 1996

**SYLLABUS
MASTERS OF PHILOSOPHY (MATHEMATICS)
PAPER-III**

ANALYSIS AND DIFFERENTIAL EQUATIONS

UNIT – I

LEBESGUE MEASURE: Introduction – Outer measure – Measurable sets & Lebesgue measure – A non-measurable set – Measurable functions – Littlewood's three principles.

UNIT – II

THE LEBSGUE INTEGRAL: Riemann integral – The lebsgue integral of bounded function over a set of finite measure – The integral of a non-negative function – The general lebsgue integral – Convergence in measure.

UNIT – III

DIFFERENTIATION & INTEGRATION: Differentiation of monotone functions – Functions of bounded variation – Differentiation of an integrate Absolute continuity – Convert functions.

(Section 5 – 5.1 to 5.5)

UNI – IV

DIFFERENTIAL EQUATIONS: Introduction equations with constant coefficient : Introduction – The 2nd order homogenous equation – Initial value problem for second order equations – Linear dependence – A formula for the wronskian – The non-homogeneous equation of order two – The homogenous equation of order ‘n’ – Initial value problem for nth order equations – Equations with real constant.

(Section 2 – 2.1 to 2.9 omit 2.10, 2.11, 2.12)

UNIT – V

LINEAR EQUATIONS WITH VARIABLE CO-EFFICIENTS:

Introduction – Initial value problem for the homogenous equation – Solutions of the homogeneous equation – The wronskian and linear independence – Reduction of order of a homogeneous equation – The non-homogeneous equation – The Homogeneous equations with analytic co-efficient – The legendry equation.

Reference:

1. Real Analysis by H.L. Royden. 3rd edition – Prentice Hall India Publications.
2. An Introduction to Ordinary Differential equations by Earl A. Coddington – Prentice Hall India Pubishers.

SYLLABUS
MASTERS OF PHILOSOPHY (MATHEMATICS)
PAPER-IV

REAL & COMPLEX ANALYSIS

Unit I

Positive Borel Measures: Vector Spaces – Topological Preliminaries – The Riesz representation theorem – Regularity properties of Borel Measures .

Unit II

L^p Spaces: Convex function and inequalities – The L^p Spaces - Approximation by continuous functions .

Unit III

Elementary Hilbert Space theory: Inner product and linear functionals – Orthonormal sets - Trigonometric series

Unit IV

Examples of Banach Space Techniques: Banach Spaces – Consequence of Baire's Theorem – Fourier series of continuous functions – Fourier coefficient of L^1 Functions – The Hahn – Banach Theorem

Unit V

Complex Measures : Total Variation - Absolute Continuity – Consequence of Randon – Nikodym Theorem – Bounded Linear Functional L^p – The Riesz representation theorem

Integration on Product Space: Measurability on Cartesian Products – Product measures – The Fubini Theorem - Completion of Product Measures - Convolutions

Fourier Transforms: Formal Properties – The Inversion theorem – The Plancherel Theorem – The Banach Algebra L^1 .

Elementary Properties of Holomorphic Functions: Complex Differentiation – Integration over paths – The local Cauchy Theorem – The power series representation – The open mapping theorem – The Global Cauchy Theorem – The Calculus of residues.

Text Book

“Real & Complex Analysis” by Walter Rudin

II Edition – Tata McGraw Hill Publishing Co.Limited, New Delhi

SYLLABUS
MASTERS OF PHILOSOPHY (MICROBIOLOGY)
PAPER-III
HISTORY AND SCOPE OF MICROBIOLOGY

Important discoveries in the physical, chemical and biological sciences (plants and animals) – A historical account. Importance of science (physical, chemical and biological) in human society. The scope of Microbiology. The first microscopic observation; Leeuwenhock's contributions and the microscope ; Spontaneous geneeration versus biogenesis; The germ theory of disease; -The pure culture concept; Immunization; Paitow's and Koch's contribution and other – widening horizons; growth of organize. Microbiology in science; Microbes and fermentation; Microbiology in

human welfare, industry, medicine, agriculture and environmental sanitation. Importance of Microbiology in Molecular biology and Biotechnology; Present status of Microbiology; Microbiology and human society.

**SYLLABUS
MASTERS OF PHILOSOPHY (MICROBIOLOGY)
PAPER-IV**

DIVERSITY OF THE MICROBIAL WORLD

A broad outline describing various types of microorganisms (viruses, bacteria, algae, fungi and protozoa); Microscopic observations of some important members of bacteria, algae, fungi, and protozoa to elaborate the various shapes and thallus range in these groups. The virus studies should be undertaken using electron microscopic and diagrammatic photographs. Detailed studies of life cycle patterns in bacteria, algae, fungi and protozoa. The study should include history, classification, occurrence, cell structure,

cytology, reproduction, life cycle patterns and importance of each group. Basic physiological factors of growth (pH, temperature, nutritional requirements) should also be discussed with reasons

SYLLABUS
MASTERS OF PHILOSOPHY (PHYSICS)
PAPER-III
ELECTRONICS AND INSTRUMENTATION

UNIT – I :

TRANSDUCERS AND SIGNAL CONDITIONING

Basic Measurement System – Classification of Transducers in instrumentation and control Systems – Selection – Types – Transducers: Strain gauge – variable resistance – capacitive – inductive – potentiometric resistance type – Piezoelectric – LVDT – Thermistors – thermocouple – Pyrometers – Solar Batteries – Accelerometers – Selsyns – Tachogenerators – Differential transformer – microsyn – Servomotors – eddy current clutches – Electronic aided measurement (blockdiagram) – Basic Instrumentation amplifiers and applications – Chopped and modulated dc amplifier – modulators.

UNIT – II :

DATA ACQUISITION, CONVERSION AND TRANSMISSION

Data acquisition system – Signal conditioning of the inputs – Single Channel data acquisition System – Multichannel DAS. Sensors based computer data system – Data transmission system. Digital modulation – Pulse Code format – modems.

UNIT – III :

ELECTRONIC MEASURING INSTRUMENTS

Digital multimeters – Digital frequency meter – Digital measurement of time – Digital tachometer – Automation in digital instruments – Digital phase meter – Digital capacitance meter – Microprocessor based instruments – Electrocardiography – ECG amplifiers – electrodes and leads – ECG recorder principles.

UNIT – IV :

ELECTRONIC CONTROL INSTRUMENTALS

Advantage of Electronic control of Devices – DC Motor speed control – Over voltage and overload protection of DC motors – speed control of a single phase and three phase induction motors – Speed control of synchronous motors –

UNIT- V:

TEMPERATURE CONTROL

Temperature control – Illumination control – Automatic water level indicator using SCR – Battery operated in vector circuit using power transistor.

Reference:

1. S.K. Bhattacharya, S. chatterjee, Industrial Electronics and Control, Tata McGraw Hill, 1995 (unit I (Transducers), Unit IV).
2. H.S. Kalsi, electronic (Instrumentation, Tata McGraw Hill, 1995)(unit I Signal Conditioning) unit II, Unit III).
3. Leslia Crom Well, Fred J. Weibell, Erich A. Pfeiffer, Biomedical Instrumentation and measurements, Prentice Hall of India, 1997 (Unit III Electrocardiography).

SYLLABUS
MASTERS OF PHILOSOPHY (PHYSICS)
PAPER-IV

NUCLEAR PHYSICS

UNIT-I

Nuclear Properties

Survey of some nuclear properties, Nuclear radius, Nuclear masses and abundances, Binding energy, Electric and magnetic moments and nuclear shapes, Nuclear angular momentum and parity, Nuclear spin, Nuclear moments.

2: Nuclear Forces

Nuclear stability and the forces between nucleons, Deuteron problem, n-p scattering at low energies, Scattering length, Spin dependence of n-p scattering, Effective range in n-p scattering.

3: Nuclear Models

Liquid drop model, Semi-empirical mass formula, Magic numbers, Shell model, The collective model.

4: Nuclear Reactions

Types of nuclear reactions, Reaction cross-section, Conservation laws, Q-values and its significance, Breit-Wigner formula, Compound nucleus, Optical model, Direct reactions.

5: Radiation Detectors

Interaction of radiation with matter, G.M. counter: Basic principle, working, quenching and mechanism of pulse formation; Gamma Ray Spectrometer: Basic principle and working of NaI(Tl) detector, Pulse formation mechanism, Basic idea of pulse processing unit, Concept of energy resolution and efficiency; Semiconductor detectors: Basic principle, Construction and working of Si Surface barrier, Lithium drifted and high purity Germanium detectors.

References:

1. Introductory Nuclear Physics - K.S.Krane
2. Nuclear Physics - Roy and Nigam (9th Edition), New Age Int.
3. Nuclear Physics - Irving Kaplan (2nd Edition), Narosa Pub.
4. Introductory Nuclear Physics - K S Krane, John Wiley
5. Nuclear Physics - D C Tayal, Himalaya Publication
6. Radiation Detectors - S S Kapoor

SYLLABUS MASTERS OF PHILOSOPHY (POLITICAL SCIENCE) PAPER-III POLITICAL THOUGHT

WESTERN POLITICAL THOUGHT:

INTRODUCTION:

Nature of Political Thought; Utility and Value of Political Philosophy; The problem of Value and Ideology; Political Science and Political Philosophy.

- PLATO
- ARISTOTLE
- AFTER ARISTOTLE
- THE ROMANS
- CHURCH FATHERS
- CHARACTERISTIC THEORIES OF MIDDLE AGES

- ST. AQUINAS
- MARSILIO OF PAUDA
- MACHIAVELLI
- BODIN
- HOBBS
- LOCKE
- MONTESQUIEU
- ROUSSEAU
- BURKE
- JEREMY BENTHAM
- JOHN STURAT MILL
- HEGEL
- AUGUSTE COMTE
- T.H.GREEN
- KARL MARX

Indian political thought:

UNIT 1 Background of Social and Political Thought

1. Colonial Intervention in Society, Economy and Polity
- Modern Indian Political Thought: Issues & Approaches

Unit 2 Socio-Political Reform in the 19 Century India

Introduction

Raja Ram Mohan Roy

M. G. Remade

Unit 3 Militant Nationalism

Introduction
B. G. Tilak
Sri Aurbindo
Bhagat Singh

Unit 4 Colonialism, Caste Order and the Tribal Society

Introduction
Jyotiba Phule
Periyar Ramaswamy Naicker
Dr. B. R. Ambedkar
Anti Colonial Tribal Movements

Unit 5 Politics and Religion in Modern India: the Interface

Introduction
Swami Dayanand Saraswati, Swami Vivekanand and V. D. Savarkar
Sir Syed Ahmed Khan, Mohammad Iqbal, M.A. Jinah and Abul Kalam Azad

Gandhism: Evolution & Character

Concept of Swaraj, Satyagraha and Critique of Western Civilisation
Sarvodya and the Gandhian Alternative
Gandhian Social Revolution – I (socialism)

Nationalism and Social Revolution – I (Socialism)

Introduction
Jawaharlal Nehru
Subhash Chandra Bose
J.P. and Political Thought of Narendra Dev
Ram Manohar Lohia

Nationalism and Social Revolution – II (Communists)

Introduction
Communists and the Indian National Movement

M.N. Roy: Marxism Thought

Nationalism and Social Revolution: An Overview

SYLLABUS
MASTERS OF PHILOSOPHY (POLITICAL SCIENCE)
PAPER-IV

INDIAN POLITICS

Section-I (Approaches to the Study of Indian Political System and Development of the Indian Constitutional System)

1. Approaches to the Study of Indian Political System
2. Political Culture of India
3. Social Composition and Sociological Foundations
4. Nature of British Colonial Rule in India
5. Indian National Movement
6. Political Legacies
7. Constitutional Development and Beginning of Parliamentary Government (1773-1909)

8. Growth of Constitutional and Responsible Government (1919-1935)
9. From Provisional Autonomy to Independence (1939-1947)
10. Constituent Assembly and Making of the Indian Constitution
11. The main Approaches, Attitudes and Trends in the Making
12. Sources of the Indian Constitution
13. Preamble to the Constitution

Section- II (Constitutional Framework)

1. Nature of the Indian Political System
2. Dynamic secularism
3. Federalism in India
4. Constitutions Conscience: Fundamental Rights
5. Fundamental Duties
6. Directive Principles of State Policy
7. Constitutional Executive of India
8. Real Executive in India – The Council of Minister and the Prime Minister
9. Union Parliament
10. Supreme Court and Judicial Review
11. State Executive
12. State Legislature
13. State Judiciary
14. Relations between the Union and the States
15. Issue of State Autonomy
16. International Between National Politics and State Politics
17. Amendment Process
18. Judicial Activism

Section – III (Working of the Indian Political System)

1. Bureaucracy
2. Panchayati Raj
3. Party System in India
4. Pressure Group in India
5. Politics of Defections in India
6. Elections and Voting Behavior

7. Election Commission
8. Economic Planning in India
9. Linguism in Indian Politics
10. Casteism in Indian Politics
11. Regionalism In Politics

Unit 4

12. Impact of Religion and Communalism on Indian Politics
13. The problems of Political Corruption
14. National Integration
15. Tradition and Modernity in India
16. Problems of Nation Building and Political Development
17. Prospects of Parliamentary Democracy in India
18. Impact of Planning on Indian Politics
19. Agriculture Sector and Political Development
20. Green Revolution
21. Factions and Factional Politics

Unit 5

22. Coalition Politics in India
23. Political Power Structure
24. Political Elites
25. Ethnic and other Groups
26. Emerging Trends in Indian Politics
27. Reservation Policy: Experience and Debate
28. Human Rights
29. National Commission on Constitutional Review

30. Problem of Human Development

SYLLABUS
MASTERS OF PHILOSOPHY (PSYCHOLOGY)
PAPER-III

CLINICAL PSYCHOLOGY

Unit I:

Clinical Psychology & Mental Health: History of Clinical Psychology and its role in understanding and alleviation of mental illness, promotion of mental health and rehabilitation of the mentally ill or handicapped; training of Clinical Psychologists and issues concerning scientist professional model; role and function of Clinical

Unit II: Psychologists in community mental health/rehabilitation programme, in mental hospitals/psychiatric institutions, NGO set-up; broader perspective of clinical psychology to help minorities, the social disadvantaged, women in special condition.

Unit III: Psychosocial aspects of mental health and illness: The role of self-concept, self-image and self-perception in the development of behavior; attribution theory; social skill and interpersonal models of mental health/illness.

Unit IV: Social Pathology: Crime and delinquency, suicide, addictive behavior, social aggression with special reference to Indian context.

Unit V: Culture, Mental Illness and Role of Family : Social class; social change; culture shock; migration, religion and gender related issues with special reference to India; role of family in mental health and illness; communication problems and emotional adaptation/ maladaptation in family set-up; stress-burden/mental illness among care-givers in the family; expressed emotions and relapse.

Disability and Rehabilitation: Psychosocial aspects of disability and rehabilitation in Indian context; the role of family and society in the education, training and rehabilitation of disabled.

Ancient Indian thought: Ancient Indian concept of cognition, emotion, personality, motivation and their disorders; social identity and stratification (including Varnashram Vyavastha).

Introduction to psychopathology: Etiology of mental disorders - psychosocial models.

Psychopathology of Neurotic, Stress-related and Somatoform Disorders: Anxiety disorders; Dissociative (conversion) disorders; Obsessive compulsive disorder; Phobic anxiety disorders; Somatoform disorders, Adjustment disorders and Behavioral syndromes associated with Psychophysiological disturbances.

Psychopathology of Psychotic Disorders: Schizophrenia; delusional disorders; mood (affective) disorders, and other psychotic disorders.

Psychopathology of Personality and Behavior Disorders: Specific personality

disorders; Habit and impulse disorders; Mental and behavioral disorders due to psychoactive substance use; Sexual dysfunctions and disorders; Psychoactive substance use disorders.

Psychopathology of Old Age: Process of aging; stress & coping; psychological disorders in old age; research and current trends in this field.

Psychopathology of Childhood and Adolescence Disorders: Psychopathology of emotional, behavioral and developmental disorders of childhood and adolescence.

SYLLABUS
MASTERS OF PHILOSOPHY (PSYCHOLOGY)
PAPER-IV
COUNSELING & GUIDANCE

Unit - I:

Introduction to Psychotherapy and Counseling: Definitions, Objectives, Training, Professional and ethical issues, planning and recording of therapy.

Unit - II: The Therapeutic Relationship: Client and Therapist Characteristics, Illness, Technique and other factors influencing the relationship.

Unit - III: Interviewing: Objectives of interviews, interviewing techniques, types of interview, characteristics of structured and unstructured interview, interviewing skills, open-ended questions, clarification, reflection, facilitation and confrontation. Silences in interviews, verbal and non-verbal components.

Unit - IV:

Psychodynamic Psychotherapy: Origins of Psychodynamic Formulation, Stages of therapy, Process issues; Resistance, Interpretation Transference and Counter Transference, and working through and current status.

Unit - V:

Humanistic-Existential and Experiential Therapies: Historical context and philosophical basis, principles and types of therapy, current status.

Cognitive Therapies: Introduction to Cognitive Model, basic principles and assumptions, therapeutic techniques based on Cognitive Therapy, Cognitive Behavior Therapy and Rational Emotive Therapy. Application issues.

Supportive Psychotherapy: Definition, goal indications, techniques. Directive and non-directive psychotherapy, current forms of "e-" and tele-counseling.

Brief Psychotherapy: Historical context, characteristics of brief psychotherapy, selection criteria, process issues, effectiveness.

Crisis Intervention: Definition of Crisis, phases of Crisis, Techniques, Stages of crisis work, Applications.

Group Therapy: Historical origins, theoretical models, types groups, stages of group therapy, process issues including role of the therapist, techniques, applications of group therapy.

Family Therapy: The development of family therapy, schools of family therapy, models for the assessment of families, common family problems and their treatment, treatment goals, methods of therapy, terminating treatment, research in family therapy, ethics in family therapy.

Marital Therapy: Development of marital therapy, current approaches, divorce and mediation, pre-marital counseling.

Sex Therapy: Individual and couple sex therapy, techniques, sex counseling, current approaches, issues related to research.

Therapy with children: Introduction to different approaches, Psychoanalytic therapies (Ana Freud, Melanie Klein, Donald Winnicott); Special Techniques (Behavioral and Play) for developmental internalizing and externalizing disorders. Therapy in special conditions such as psycho-physiological and chronic physical illness; Parent and Family Counseling, Therapy with adolescents.

Therapy in Special Conditions: Therapies and techniques in the treatment of Deliberate self harm, Bereavement, Personality Disorders, Chronic Mental illness and Medical conditions such as Cancer, Cardiovascular Diseases, HIV/AIDS, and other terminally ill conditions. Physical, sensory and intellectual disabilities.

Psychotherapy in the Indian Context: Historical perspective in psychological healing practices from the Vedic period and the systems of Ayurveda and Yoga, Contemporary perspectives. Socio-cultural issues in the practice of psychotherapy.

Research in Psychotherapy: Introduction to psychotherapy Research, issues related to process and outcome.

**SYLLABUS
MASTERS OF PHILOSOPHY (SOCIAL WORK)
PAPER-III**

SOCIAL WORK IN INDIA

Understanding Urban, Rural and Tribal Communities

1. Distinct Characteristics of Urban, Rural and Tribal communities.

2. Changing Patterns of Social Institutions in Urban, Rural and Tribal communities, family, marriage, kinship, religion, caste.

3. Economic systems and changing patterns

- i) Occupational Patterns
- ii) Stratification
- iii) Resources: access, control and use.

4. Factors Leading to Change and their Impacts on Urban, Rural and Tribal Communities

- Urbanization, Migration, Dispersion of industries, Changing relations with land, Forest, Water resources, Development of transport and communication, Influence of liberalization, privatization and globalization.

5. Changing Face of Urban communities: Infrastructural development, Growing heterogeneity, Merging of fringe villages, the 'global city' and socio-cultural and economic implications.

Issues, Implications and Challenges

Issues

- All issues to be discussed within the framework of their implications and challenges for intervention in the context of urban, rural and tribal communities
- i) Economic issues: Poverty, Unemployment and Inequity in resource access.
 - ii) Environmental issues: Ecological imbalance, Degeneration of resources, pollution, waste disposal and sanitation
 - iii) Socio-Cultural issues: Inequality (class, caste and gender), Cultural invasion and changes in life styles and culture, Impact of global culture on local communities, Caste polarization, Communalism and regionalism
 - iv) Infrastructure and amenities: Water, Energy (power and fuel), Housing, Road, Transport & Communication, Health care services, Education
 - v) Displacement: Forest eviction, Development Projects (Highways, Dams, Special Economic Zones, Firing Range, Large scale industries, Malls and Commercial Complexes, etc.)

Challenges before the Community Worker in addressing problems/issues of Rural, Urban and Tribal communities.

Bibliography

1. A. R. Desai (1961) Rural Sociology in India, Bombay : Popular Prakashan
2. A.R. Desai and S. Devidas Pillai(Editors) (second edition) (1990) Slums and Urbanisation, Bombay : Popular Prakashan
3. Alfred de Souza(Ed.) (1983)The Indian City: Poverty, Ecology and Urban Development, New Delhi : Manohar Publications
4. Ashok Narang (2006) Indian Rural Problems, New Delhi : Murari Lal & Sons
5. C.G.Pickvance, (Ed.) (1976) Urban Sociology: Critical Essays, UK : Methuen
6. Chris Hasluck (1987) Urban unemployment : Local Labour Markets and Employment Initiatives, New York : Longman
7. Dilip Shah (2005) Rural Sociology, India : ABD Publisher
8. Edgar W. Butter (1976) Urban Sociology- A Systematic Approach, New York : Harper &

**SYLLABUS
MASTERS OF PHILOSOPHY (PSYCHOLOGY)
PAPER-IV**

NGO MANAGEMENT

UNIT - I

International Organizations Oxfam, CARE, Action Aid, Red-Cross, Rotary International, UN AIDs, Amnesty International, Transparency International, CIVICUS, BRAC (Bangladesh). Save the Children and Help-age.

UNIT II & UNIT - III

National and Regional Organization. CYSD, AGRAGAMI, BISWA, PRADAN, AWARD, DISHA, VANI. SEWA, Peoples Union for Civil Liberty, Myrada, Paribartan, Gramvikas, Basundhara.

UNIT –IV &

Schemes for NGOs ,Under various Ministries Government of India. (Ministry of Agriculture, Communication and Information Technology, Consumer Affairs, Food and Public Distribution, Culture and Tourism, Environment and Forest, Food Processing Industries, Health and Family Welfare, Human Resource Development, Labour, Non conventional Energy Sources, Rural Development, Science & Technology, Social Justice and Empowerment).

UNIT – V

Meaning, Scope, Evolution and Growth of Social Work. Social Development, Social Change and Developmental Administration. NGOs and Social Work, Goals of Development.

Social Work Values and Ethics. Reconciling Personal and Professional Values, Cultural and Religious Values. From Values to Action, Nature of Social Work Mission.

Public Welfare Program. Responsibility of state for welfare program. Structural arrangement of public welfare system in India – Central, State, District and Local. Process of Community Participation in social welfare programs – National Literacy Mission 2009, JNNURM Pradhanmantri Gramina Sadak Yojana, Sampurna Gramina Rojgar Yojana. National Rural Employment Guarantee Scheme, Gopabandhu Gramina Yojana, Sworna Jayanti Gramswa Rojagar Yojana.

Planning and Development. Planning Commission and National Development Council, State and District planning, Community Development Program. Urban Community Development and Rural Community Development.

Field Work Training and Social Work. Field Work Training, Supervision, Orientation Training, Work with Individuals, Work with Groups, Study Tours, Rural Social Work Campus, Field Work and Field Work Evaluation.

SYLLABUS
MASTERS OF PHILOSOPHY (ZOOLOGY)
PAPER-III

ZOOLOGY

WILDLIFE BIOLOGY

Unit 1

Nature of international code of zoological nomenclature principles relating to nomenclature, Taxonomic keys, objectives and uses in zoological studies.

Adaptation and evolution – coloration of animals. Non adaptive characters. Animal distribution – evolutionary significances.

UNIT – II

Biochemical origin of life. Theories and concept of evolution Neotamarkism, Neo-Darwinism –modern synthetic theory of evolution Natural selection.

What is ecosystems – Biological pyramids. Edaphic Nutrient cycle. Evolution of ecosystem.

UNIT – III

Forest resources – cause of deforestation – Demand and supply of wood, forest management – conservation and protection forestry. Introduction – conventional and non-conventional resources. Biogas programme in India. Solar photo voltaic technology. Solar thermal (ST) Programme in India.

UNIT – IV

Germ cells origin, structure and differentiation ultra structural organization of the egg with reference to egg membrane, egg cytoplasm, structure of spermatozoan Polarity, symmetry – gradient cortex – activation of egg – interaction and fusion. Cleavage :- Chemodifferentiation – cleavage Patterns – factors determining cleavage patterns.

Theories of cleavage. Gastrulation :- Morphogenetic movements – Nucleocytoplasmic interactions in morphogenesis – formation of germ layers. Fate maps – gastrulation in characters – exogastrulation.

UNIT – V

Embryonic nutrition:- Yolk utilization – amniotic and allontonic fluids. Embryonic fields. Differentiation – Nuclear factors – chemical basis gene action development. Mechanism of information transfer, molecular and embryonic development – inductors and organizers – genes and organizers. Regeneration – Experimental data – Regeneration as developmental Phenomena.

SYLLABUS
MASTERS OF PHILOSOPHY (ZOOLOGY)
PAPER-IV
ENVIRONMENTAL BIOLOGY

SECTION – A

1. **Basic concepts of ecology:** Definition, significance. Concepts of habitat and ecological niche.
2. **Factors affecting environment:** Abiotic factors (light-intensity, quality and duration), temperature, humidity, topography; edaphic factors; Biotic factors.
3. Introduction to major ecosystems of the world.
4. **Ecosystem:** Concept, components, properties and functions; Ecological energetics and energy flow-food chain, food web, trophic structure; ecological pyramids concept of productivity.
5. **Biogeochemical cycles:** Concept, reservoir pool, gaseous cycles and sedimentary cycles.

SECTION – B

6. **Population:** Growth and regulation.
7. Concept of biodiversity and conservation of natural resources.
8. Migration in fishes and birds.
9. Parental care in animals.
10. **Population interactions:** Competition, predation, parasitism, commensalisms and mutualism.
11. **Environmental Pollution:** Air, water, soil and management strategies.

**SYLLABUS
MASTERS OF PHILOSOPHY (HINDI)
PAPER-III
HINDI**

HINDI SAHITYA

खंड एक

1. साहित्येतिहास का महत्त्व, साहित्येतिहास दर्शन, हिन्दी साहित्य के इतिहास लेखन की परम्परा, आधारभूत सामग्री, साहित्येतिहास के पुनर्लेखन की समस्याएं।
2. हिन्दी साहित्य का इतिहास, काल-विभाजन, सीमा निर्धारण और नामकरण
3. आदिकाल की पृष्ठभूमि, सिद्ध और नाथ साहित्य, रासो काव्य, जैन साहित्य
4. आदिकाल का ऐतिहासिक परिदृश्य, साहित्यिक प्रवृत्तियाँ, काव्यधाराएँ, प्रतिनिधि रचनाकार।

खंड-2

1. भक्तिकाल की ऐतिहासिक पृष्ठभूमि, भक्ति आंदोलन, विभिन्न काव्य धाराएँ तथा उनका वैशिष्ट्य
2. संतकाव्य, प्रमुख संतकवि और उनका योगदान
3. सूफी काव्य, प्रमुख कवि, सूफी काव्य में भारतीय संस्कृति व लोकजीवन के तत्त्व
4. राम व कृष्ण काव्य, प्रतिनिधि कवि और रचनागत वैशिष्ट्य
5. रीतिकाल-नामकरण, प्रवृत्तियाँ, विभिन्न धाराएँ, प्रतिनिधि कवि व रचनाएँ
 1. आधुनिक काल की पृष्ठभूमि, नामकरण, काल विभाजन, विशिष्टताएँ, आधुनिक काल व नवजागरण।
 2. भारतेन्दु युग, प्रमुख साहित्यकार, रचनाएँ और विशेषताएँ
 3. द्विवेदी युग, प्रमुख साहित्यकार, रचनाएँ और विशेषताएँ
 4. छायावादी काव्य, प्रमुख साहित्यकार, रचनाएँ और विशेषताएँ
 5. उत्तर-छायावादी काव्य की विशेषताएँ, प्रगतिवाद, प्रयोगवाद, नई कविता, साठोत्तरी काव्य, प्रमुख साहित्यकार, रचनाएँ और विशेषताएँ

4.

1. हिन्दी गद्य का आरंभ व विकास
2. कहानी विधा का विकास
3. उपन्यास विधा का विकास
4. नाटक विधा का विकास
5. निबन्ध विधा का विकास
6. हिन्दी आलोचना का विकास
7. नव्यतर विधाओं का विकास
8. हिन्दी पत्रकारिता का विकास

अध्ययन के लिए सहायक पुस्तकें

रामचन्द्र शुक्ल : हिन्दी साहित्य का इतिहास, काशी नागरी प्रचारिणी सभा,
काशी।

हजारी प्रसाद द्विवेदी : हिन्दी साहित्य का आदिकाल, बिहार राष्ट्र भाषा परिषद्
पटना।

हजारी प्रसाद द्विवेदी : हिन्दी साहित्य उद्भव और विकास, राजकमल प्रकाशन
दिल्ली।

- रामचन्द्र शुक्ल : हिन्दी साहित्य का इतिहास, काशी नागरी प्रचारिणी
सभा, काशी।
- हजारी प्रसाद द्विवेदी : हिन्दी साहित्य का आदिकाल, बिहार राष्ट्रभाषा
परिषद्, पटना।
- हजारी प्रसाद द्विवेदी : हिन्दी साहित्य उद्भव और विकास, राजकमल प्रकाशन
नई दिल्ली।

SYLLABUS
MASTERS OF PHILOSOPHY (HINDI)
PAPER-IV
MAHA KAVI TULSIDAS

खंड : क-ख के लिए निर्धारित पाठ्यक्रम (व्याख्या एवं दीर्घ प्रश्न)

क) निर्धारित पुस्तकें :

1. कवितावली (बाल कांड)
2. दोहावली (50 प्रारंभिक दोहे)

खंड - (ग) : लघूत्तरी प्रश्नों के लिए निर्धारित पाठ्यक्रम :

1. रामाज्ञाप्रश्न
2. पार्वतीमंगल
3. गीतावली
4. बरवै रामायण

अध्ययन के लिए सहायक पुस्तकें :

- राममूर्ति त्रिपाठी : तुलसी, लोकभारती प्रकाशन, इलाहाबाद
बलदेव प्रसाद मिश्र : तुलसीदर्शन, हिन्दी साहित्य सम्मेलन, प्रयाग
रामनरेश वर्मा : सगुण काव्य की सांस्कृतिक भूमिका, हिन्दी साहित्य सम्मेलन, प्रयाग
विष्णुकांत शास्त्री : तुलसी के हिय हेरि राम, लोक भारती, इलाहाबाद
उदयभानु सिंह : तुलसी - दर्शन - मीमांसा, नागरी प्रचारिणी सभा, वाराणसी
लक्ष्मीनारायण शर्मा : सार्वभौम श्रीराम, चिंतन प्रकाशन, पिलानी
बैजनाथ प्रसाद : भक्ति आंदोलन और आ. रामचन्द्र शुक्ल, विशाल पब्लिकेशन, पटना
रत्नाकर पाण्डेय : तुलसीदास और उनका संदेश, स्वराज प्रकाशन, दिल्ली
नगेन्द्र : तुलसी संदर्भ, वाणी प्रकाशन, दिल्ली
माताप्रसाद गुप्त : तुलसीदास, लोकभारती, इलाहाबाद
लल्लन राय : तुलसी की साहित्य साधना, वाणी प्रकाशन, दिल्ली

**SYLLABUS
MASTERS OF PHILOSOPHY (HISTORY)
PAPER-III
HISTORY**

MODERN INDIAN HISTORY

UNIT-I: From 1818 to 1885 (50 marks; 40 lectures)

Module 1: Understanding Modern India

- 1.1 East India Company as a super-ordinate power-colonial state and ideology
- 1.2 Orientalism, Utilitarianism in relation to India.
- 1.3 Theory of rent and laissez faire

Module 2: The Indian Response

- 2.1 Ram Mohun, Vidyasagar and the Young Bengal Movement
- 2.2 Socio-religious movements in other parts of India

Module 3: Rural Economy and Society

- 3.1 Impact of Colonial Land Revenue Settlements, Permanent Settlement in Operation and Commercialization of Agriculture and effect of rural indebtedness on the peasants.
- 3.2 Peasant response with special reference to the tribal dimension, taking Santhal, Oraon and Munda Revolts as examples.

Module 4: The Non-agrarian Sector

- 4.1 The process of Deindustrialization and the related debates.
- 4.2 Banking: indigenous and modern.
- 4.3 Emergence of modern industries—railway, jute, cotton and steel.

Module 5: Early Resistance to Colonial Rule

The Revolt of 1857: causes, interpretations and consequence.

Module 6; Colonial Intervention and Growth of Modern Education.

- 6.1 Differential impact, growth of a new intelligentsia, formation of early political organizations leading to the formation of the Indian National Congress.
- 6.2 Revivalist and reform movements
- 6.3 Women as recipients and agents of change in modern India with reference to women's writings (to be discussed along with some specific and prominent examples.)

UNIT-II: From 1885 to 1950 (50 marks; 40 lectures)

Module 1: Historiography of Indian Nationalism: Economic social and political trends up to 1919 as background:

- 1.1 Early Congress and rise of Extremism.
- 1.2 Partition of Bengal and the Swadeshi.
- 1.3 British response and Morley-Minto Reforms.
- 1.4 Revolutionaries in India and abroad.
- 1.5 Rise of Gandhi.

1.6 Trends in Muslim politics—Aligarh Movement, The Muslim League Demand for separate electorate, Lucknow Pact.

Module 2: The Gandhian Era.

- 2.1 Rowlatt Act and Rowlatt Satyagraha.
- 2.2 Montague Chelmsford Reforms.
- 2.3 Khilafat and Non-cooperation.
- 2.4 Simon Commission, Nehru Report and Round Table Conference.
- 2.5 Civil Disobedience.
- 2.6 Quit India Movement.

Module 3: New Trends in National Movement.

- 3.1 Role of social groups and classes including Dalits.
- 3.2 Ideological trends in the Congress.
- 3.3 Kisan Sabha Agitations and Trade Union Movements, Peoples' Movements. 3.4 Left Movements and the formation of the Communist Party abroad.
- 3.5 Subhas Chandra Bose and the INA.
- 3.6

Module 4: Pre-War Political Developments

- 4.1 Govt. of India Act 1935.
- 4.2 Working of the Provincial Ministries.
- 4.3 Cripps Mission, Wavell Plan and Cabinet Mission.

Module 5: Post War Upsurges

Module 6: Communal Politics and Partition

- 6.1 Growth of Hindu Fundamentalism and Muslim Separatism.
- 6.2 Demand for Pakistan, Response to the Demand.
- 6.3 National and Regional. British Policies
- 6.4 Partition and Independence
- 6.5 Integration of Princely States
- 6.6 Framing of the Indian Constitution.

Module 7: India from 1947-1964

- 7.1 Partition, Migration and Rehabilitation.
- 7.2 Agrarian Reforms. Tebhaga and Telengana.
- 7.3 Framing of the Indian Constitution and establishment of Parliamentary Democracy.
- 7.4 Making of Indian Foreign Policy and Non-Alignment.

Suggested Readings:

- 1. Banerjee, Sekhar, From Plassey to Partition, Orient Longman.
- 2. Brown, Judith: Gandhi's Rise to Power.
- 3. Chandra, Bipan, et. al., India's Struggle for
- 4. Chandra, Bipan, et. Al., India after Independence.
- 5. Desai, A. R. : Social Background to Indian Nationalism.

6. Sarkar Sumit: Modern India 1885 to 1947.
7. Sen, S.N, An Advanced History of Modern India, Macmillan, Kolkata, 2010.
8. Bandyopadhyay, Sekhar, Nationalist Movement in India: A Reader, OUP, 2009.
9. Bayly, C A., Indian Society and Making of the British Empire.

**SYLLABUS
MASTERS OF PHILOSOPHY (HISTORY)
PAPER-IV**

HISTORY OF EUROPE

UNIT-I (50 marks; 40 lectures)

Module 1

- 1.1 Understanding the 18th century Europe
- 1.2 Enlightened despotism
- 1.3 Socio – economic and political background of the French Revolution – philosophers.

Module 2

- 2.1 Trends in the French Revolution
- 2.2 Aristocratic revolt – bourgeois popular and peasant revolt
- 2.3 The Constituent assembly and its achievements
- 2.4 Girondins and Jacobins – the Reign of Terror and the rise and fall of the Jacobin Republic
- 2.5 The Thermidorian reaction and the Directory
- 2.6 Interpreting the French Revolution
- 2.7 Role of women in French Revolution

Module 3

- 3.1 Napoleon Bonaparte: the revolution legacy
- 3.2 The reorganization of France and Europe – fall of Bonaparte
- 3.3 Conflicting estimation of Napoleon's character and achievements.

Module 4

- 4.1 The Vienna Congress
- 4.2 Metternich and the Conservative order
- 4.3 An overview of the revolution of 1830 and 1848
- 4.4 Pattern of insurrection in France and other central European countries – collapse of therevolution.

Module 5

- 5.1 The emergence of nation states in Central Europe
- 5.2 Unification of Italy and Germany
- 5.3 Russian modernization
- 5.4 France under the Second Empire.

UNIT-II (50 marks; 40 lectures)

Module 1

- 1.1 Industrialisation in Europe – difference in the industrialization process between England and the Continent – France, German and Russian industrialization
- 1.2 Rise of the working class movements and the Socialist thought (Utopian Socialism, Marxism)
- 1.3 Art and culture, literature and Science of the 18th century Europe with special reference to Romanticism and its cultural and political aspects.

Module 2

2.1 The Third Republic, Paris Commune and the new German Reich

2.2 Europe in 1871 – Bismarckian diplomacy – new balance of power – Kaiser William II and the new course in the German foreign policy.

Module 3

The eastern question in later 19th century with reference to the Crimean War and the Balkan Nationalism.

Module 4

4.1 Age of imperialism (1871 – 1914) –The impetus behind colonial expansion – Scramble for colonies.

4.2 Anglo German antagonism – Triple Alliance – Triple Entente and the emergence of two armed camps – origin of the First World War.

Module 5

5.1 The impact of the War on the old order – Collapse of the Dynastic empire –

5.2 Revolution in Russia – origin of the October Revolution and the Success of the Bolsheviks

5.3 Fourteen points of Wilson.

Suggested Readings

1. Blanning, T.C.W, The French Revolution: Class War or Culture Clash.

2. Cobban, Alfred, History of Modern France, Vol. 1]3.

3. Cipolla, C.M, Fontana Economic History of Europe, Vol. III (The Industrial Revolution), Vol. 4 (Part 1 & 2).

4. Doyle, William, Origins of the French Revolution.

5. Droz, Jacques, Europe Between Revolutions.

6. Ellis, G, The Napoleonic Empire.

7.

**SYLLABUS
MASTERS OF PHILOSOPHY (SOCIOLOGY)
PAPER-III**

SOCIOLOGY

SOCIAL PROBLEMS IN INDIA

SOCIAL FRAMEWORK

- 1. Social Transformation and Problems**
- 2. Approaches and Paradigms**
- 3. Social Problems: The Indian Context**

STRUCTURE IN TRANSITION –I

4. Social Demography
5. Migration
6. Urbanisation
7. Changing Family Structure

STRUCTURE IN TRANSITION –II

8. Unemployment
9. Labour: Industrial
10. Labour: Rural
11. Labour: Women
12. Labour: Children

PATTERNS OF DEPRIVATION AND ALIENATION

13. Poverty and its social dynamics
1. Crime and delinquency
2. Drug addiction and alcoholism
3. Violence and terrorism

IDENTITY, DIGNITY AND SOCIAL JUSTICE-1

4. Children
5. Youth : identity and alienation
6. Women

7. The aged

IDENTITY, DIGNITY AND SOCIAL JUSTICE-II

8. Scheduled castes

9. Scheduled tribes

10. Ethnicity

11. Minorities

ECOLOGY AND RESOURCES

12. Land : access , control and management

13. Water: access , control and management

14. Forests : access , control and management

15. Role of the state and other associations

ADVANCED SOCIOLOGICAL THEORIES

ADVANCED SOCIOLOGICAL THEORIES

Sub. Code: MAS/Y/210

Credits: 02

Total Marks: 200

Minimum Pass Marks: 40%

Internal Assessment: 40 Marks

University Examination: 60 Marks

Sociological Theory :

Meaning, Nature and significance. Types : Micro, Macro and Middle Range, Speculative and Grounded. Theory and Empirical research : Interrelationship.

Functionalism :

Durkheim's functionalism. Merton's Codification and Reference Group. Person's Pattern Variables and AGIL Paradigm.

Conflict Theory :

Radical sociology (Mills and Horowitz). Dialectical sociology and nature of Conflict in post-Capitalist society (dahredrof). Functions of social conflict (coser).

Symbolic Interactionsim :

The basis of symbolic interactionsim. Distinctive nature of human beings (Mead). Formalization of Symbolic Interaction Theory (Blumer).

Penomemology and Ethnomethodolgy:

Phenomenolgy and the Origin of Ethnomethodology (Schutz), A conceptual Framework of Ethnomethodology (Gerfinkel). Critical Evaluation of Phenomenolgy and Ethnomethodolgy.

SYLLABUS
MASTERS OF PHILOSOPHY (HOME SCIENCE)
PAPER-III

HOME SCIENCE

FOOD & NUTRITION

UNIT-I

Basic Food groups – basic 4,5,7, and 11 Classification of foods based on nutrients cooking methods and functions of food sugar cookery – stages of cookery Cereal – Composition, nutritive value of rice wheat and locally available millets parboiling and milling of rice and methods of cooking. Pulses – Composition, nutritive value, toxic substances, germination- process, milling methods of cooking.

Unit-II

Vegetable and Fruits- Composition, nutritive value classification, Factors affecting pigments selection and storage methods of cooking and changes during cooking meat – Nutritive value methods of cooking factors affecting tenderness of meat rigor mortis fish-classification nutritive value selection and cooking

Unit-III

Carbohydrates – Definition classification, functions sources and role of fiber or unavailable carbohydrates in human nutrition proteins- Definition classification functions sources and requirement Evaluation of protein quality –PER,BV, NPU and chemical score supplementary value of proteins. Lipids –Definitions classification, Sources and properties Essential fatty acids-sources functions and effects and of deficiency.

Unit-IV

Minerals – distribution functions absorption utilization requirements sources and effects of deficiency –calcium, Phosphorus sodium and potassium Trace elements-iron, iodine, copper, fluorine and zinc- functions sources and effects of deficiency vitamins Fat soluble vitamins – vitamin A,D,E,K –history, Functions sources, requirements and effects of deficiency, water soluble vitamins- acid, B1,B2 niacin, folic acid vit B12, Pyridoxine, biotin and Pantothenic acid- Functions, Sources, requirements and effects of deficiency.

Unit-V

Origin and Develop of catering- definition of cateringTypes of catering establishing- Organization, Objectives and work pattern, commercial-hotels, motels, restaurants and star – rating of hospitals, School lunch and industrial catering -transport – rail, road , air and space. Menu planning – definition types of menus- standard portion size- definition, portioning equipment and portion control

Diet therapy – definition, Purposes of a therapeutic diet, principles and types of hospital diet –clear fluid full fluid soft light bland and regular dietDietitian- types qualities qualifications and role of dietitian in managing hospital dietary Types of feeding Concepts of oral and tube feeding and parenteral nutrition routes of administration. Febrile Conditions – acute, chronic and recurrent-Typhoid TB and malaria Diseases of the kidney and urinary tract-nephritis nephrotic syndrome urinary calculi and renal failure and diabetes mellitus of the cardio- vascular systems – atherosclerosis hypertension hyper- Cholesterolemia coronary heart disease

Concept and scope of community nutrition- meaning definition interrelationship with various departments – sociology medicine biology and agriculture
Assessment of nutritional status in a community- Direct and Indirect methods – merits and demerits common nutritional problems in India- causes signs and symptoms
Programmes for nutritional problems in India – prophylactic programme midday meal programme and ICDS

Reference:

1. Swaminathan M Essentials of food and nutrition vol I and II Bappco Publication 1996
2. Srilakshmi B .Food science new Age International (p) Ltd Publishers third edition 2005
3. Norman W Potter and Joseph .H Hotchkins food science CBS Publishers and edition 2005
4. Sumathi R .Mudambai ,Rajagopal M.V Fundamentals of foods and nutrition New Age International (P) Ltd Publisher third edition 1997
5. Paul s. Text books of Bio-nutrition curing diseases through diet CBS publications first edition 2005

**SYLLABUS
MASTERS OF PHILOSOPHY (HOME SCIENCE)
PAPER-IV**

ADVANCED STUDY IN HUMAN DEVELOPMENT

1.Family-

definition function type advantages and disadvantages of joint and nuclear families – crisis in the family definition types and effects of crisis on family members – mental illness unemployment dowry death and suicide Principle of inheritance interaction of heredity and environment habit formation- definition and principle.

2.Prenatal development-

signs of pregnancy factors influencing prenatal development complications during pregnancy types of deliveries and types of birth still birth premature post mature twins triplets etc..

3.New born Baby-

Characteristics of new born baby feeding-breast feeding and bottle feeding Development-Physical and motor development social emotional intellectual and language development-behavior problems – cause and treatment temper tantrums thumb sucking bed- wetting nail biting masturbation telling lies and stealing

4.Family clothing plan and Fibre:

Based on family budget occasion climate occupation and interests number of family members age figure fashion quality and accessoriesCare of clothing: Principles of laundering and storing cotton wool silk rayon and synthetic fabrics study on the selection of suitable laundry soaps bleaches whitening agents and stiffening agents stain types methods of stain removal

Classification of textile fibers: General properties of fibers – manufacture uses and properties of cotton linen and silk nylon terylene and acrylicFabric Construction: Parts of simple loom and weaves operation types of weaves basic and figure weaves other methods of fabric construction- knitting braiding felt lace and non woven fabrics

5. School going children physical social .emotional and intellectual development interests and hobbies adolescence definition development physical social emotional and intellectualDelinquency-causes prevention and rehabilitation drug addiction-rehabilitation measure for the victims sex education: Definition need for imparting sex educations to adolescents. Adult: Development task physiological psychosocial Crisis of early and middle adulthood old age –characteristics needs and problems.

types of income methods of handling family income family budgets institutions for family saving

House planning and finance: House planning- functions of a home selection of a site principles involved in planning a goods house plans for different income groups housing finance- financial consideration in housing source finance –government any other agencies –housing board co-op

Resource Management: Definition of management process – planning , controlling and evaluating – values , goals and standards. Resources – classification, characteristics,

factors, affecting the use of resources. Family income and expenditure – types of income, methods of handling family income, budget, institutions for family saving.

Housing Planning and Finance:

House Planning – functions of a home, selection of a site, principles involved in planning a good house, plans for different income groups. Housing finance – financial consideration in housing source finance government and other agencies- housing board co-operative society and NGO

Art in everyday life:

Importance of good taste, design elements, types and principles of design – emphasis, harmony, balance, proportion and rhythm.

Resources –management: Definition of management – management process –planning controlling and evaluating- values goals and standards. Resources-characteristics, factors, affecting the use of resources

Home science extension education:

meaning definition objectives and principles need for extension in education- origin concept objectives characteristics steps in teaching role of home science extension in rural development meaning importance and principles of programmes development process.

References:

1. Dantagi S., fundamental of Textiles and their care, Orient longment ltd New Delhi 1993.
2. Hollen N.Saddler, Textile Mac Millan New York 1977
3. Erwin M.D and Kinchen L.A ‘Clothing for Moderns ‘ Macmillan co New york 1970
4. Newman and Newman Development through life a psychosocial approach 6th edition Brooks/ Cole publishing company 1995.
5. Arya and Subash, C. Infant and child care fore mother vikas New Delhi 1972.

SYLLABUS
MASTERS OF PHILOSOPHY (PHYSICAL EDUCATION)
PAPER-III
PHYSICAL EDUCATION
HISTORY & PRINCIPLES OF PHYSICAL EDUCATION

Section A

Definition, Meaning & scope of Physical Education. Aims & objectives of Physical Education. Relationship of Physical Education & Recreation. Contribution of physical Education towards general education.

Section B

History of physical Education in ancient Greek, comparative study of Spartan Athenian education. The origin and development of Olympic Games. Development of Asian Games.

Section C

Physical Education in Germany, Sweden & Denmark (Emphasis only on contribution of based, Guts Moths, John Spies, Machtegall, Ling). Present status of Physical Education & Recreation in Russia and Japan. History of physical education in India (Pre & Post independence Era).

Section D

Critical appreciation of the following: State Sports departments, I.O.C. policies for developing Education & Sports, Compulsory programmed of physical education & sports for school Modern Olympics, Sports Authority of India, South Asian Federation Games

Section E

Foundation of physical education, Biological activity, its need, principle of use and dis-use Growth and development, Age & Sex difference, Qualification of physique.

Reference Books:

1. Charles & Bucher: Foundations of Physical Education
2. Harold m. Barrow: Man & His movement principles of phy. Education.
3. J.F. Williams: principles of physical education.
4. Cowl & France: philosophy and principles of physical education.
5. D.G. Wakharkar: Manual of physical education.
6. M.L. Kamlesh & M.S. Sangral: physical education
7. Upadyke Johnson: principles of modern physical education health & recreation.

SYLLABUS
MASTERS OF PHILOSOPHY (PHYSICAL EDUCATION)
PAPER-IV
SPORTS TRAINING & BIOMECHANICS IN PHYSICAL
EDUCATION

Section A

Introduction to Sports Training

1. Meaning and definition of sports Training and Coaching
2. Aims and Tasks of sports Training
3. Characteristics of sports Training
4. Training Load and its Factors – Quality of movements, Type of Exercises, Load Volume and Load Intensity.
5. Loading and Adoption Process.
6. Forms of adaptation; Adaptation, de-adaptation, Maladaptation, and re-adaptation;
7. Laws of Adaptation.
8. Principles of Loading.
9. Judgment of Training Load: Objectives and Subjective Means.

Section B

Over Load: Meaning, Causes, Symptoms and Tackling of Over Load .

1. Principles of Sports Training
2. Recovery and its phases, Factors Affecting recovery, Means of Faster recovery.
3. Types of Training Means.

Section C

Conditional Abilities:

1. Strength : Meaning, Forms, Factors determining, Strength Training Methods, Organisation of Strength Training, General Guidelines for Strength Training, Principles of Strength Training , Strength Training for Children and Women.
2. Speed:- Meaning, Forms of Speed, Factors determining Speed Barrier.
3. Endurance:-Meaning and Significance, Forms of Endurance, Factors determining Endurance, Training Methods.

Section D

(Motor abilities)

Motor Abilities - Meaning of Flexibility, Forms of Flexibility, Factors determining Flexibility, Methods for Flexibility training, and Guidelines for Flexibility Training.

1. Coordinative Abilities – Meaning , Types of Coordinative Abilities, Characteristics of Coordinative Abilities, Importance of coordinative Abilities, Methods for Coordinative Ability Training.
2. Periodisation – Meaning and Types of periodisation, contents of training for different periods.
3. Planning & Meaning, Principles of Planning, Types of Training Plans.
4. Competitions:- Importance of Competitive Frequency, Preparation for Competitions.

Section E

1. Bio-mechanics –Meaning, justification & Importance
2. Relative motion, cause of motion, kinds of motion
3. Kinematics - Linear, kinematics, distance and displacement Speed velocity and acceleration.
4. i) Projectiles, Trajectory, angle of release, velocity of release height of release
ii) Centripetal and Centrifugal forces
iii) Rebound; angle of rebounels, Type and effect of spin, Ball Spin (swing)
iv) work-power –Energy, kinds of liver.

REFERENCES:

1. Dick, F.W. : Sports Training Principles, Lepus, London1980
2. Enson, C.R. Fischer AC : Scientific basis of Atheletic conditioning, Lea and Feliger, Philadelphia, 1979
3. Brook, J.D. Whiting H.T.A : Human Movement a Field of study.
4. Dr. Singh Hardgal : The Science -9 sports trainging
5. Cooper, K.H. : The Aerobic way, Bantom books Inc. 1978
6. Bunn, J.W. : Scientific Principles of coaching, Englewood ciffs, Prentice Hall
7. Breer Merison, R. : Efficiency of Human Movement London W.B. Saunders.

**SYLLABUS
MASTERS OF PHILOSOPHY (PUNJABI)
PAPER-III**

PUNJABI

History of Punjabi Literature from Ancient to Modern times

Medieval: Option-I Gurmat Poetry

- (a) Cultural Background
- (c) World View present in Gurmat Kaav
- (d) Symbolism in Gurmat Poetry in the context of Indian Heritage of Symbolism
- (e) Poetics of Gurmat Kaav
- (f) Linguistic Culture of Gurmat Kaav

Option-II Sufi Poetry

- (a) Cultural Background
- (b) Sufi Mysticism
- (c) Imagery in Sufi Kaav
- (d) Poetics of Sufi Kaav
- (e) Lyricism in Sufi Kaav

Option-III Qissa Kaav

- (a) Cultural Background
- (b) Qissa Kaav as Tragedy
- (c) Fictional structure of Qissa Kaav
- (d) Semiotics of **Punjabi** Culture at work in Qissa Kaav
- (e) Poetics of Qissa Kaav

Option-IV Vir Kaav

- (a) Cultural Background
- (b) Distinctive features of Vir Kaav
- (c) Heroes of Vir Kaav
- (d) Impact of Vir Kaav on **Punjabi** Life.

Option-V Folklore

- (a) Folklore and Folkloristics
- (b) Folklore as infrastructure to Literature
- (c) **Punjabi** Kinship System
- (d) **Punjabi** Rituals
- (e) **Punjabi** Songs
- (f) Composite Culture of Punjab as reflected in **Punjabi** Folklore
- (g) **Punjabi** Myths and Folk-tales.

Modern **Punjabi Literature

Option-II Modern **Punjabi** Fiction
Option-III Modern **Punjabi** Drama
Option-IV Modern **Punjabi** Prose, Biography
and Literary Criticism

1. Socio-political Background of Modern **Punjabi** Literature.
2. In-depth study of Modern **Punjabi** Poetry from 1900-50 A.D.
3. ---do--- from 1950 A.D. onwards.
4. Towards the poetics of Modern **Punjabi** Poetry.
5. **Punjabi** Novel and Short Story: A study into the Fictional traditions.
6. Towards the Poetics of **Punjabi** Novel.
7. Study of **Punjabi** Prose-style on the Models provided by stylistics.
8. Different schools of **Punjabi** criticism:
 - i. Traditional
 - ii. Formalistic
 - iii. Structuralist
 - iv. Marxist
 - v. Towards the science of Literature.

SYLLABUS
MASTERS OF PHILOSOPHY (PUNJABI)
PAPER-IV

PUNJABI POETRY

Option-I Gurmat Poetry

- (a) Cultural Background
- (c) World View present in Gurmat Kaav
- (d) Symbolism in Gurmat Poetry in the context of Indian Heritage of Symbolism
- (e) Poetics of Gurmat Kaav
- (f) Linguistic Culture of Gurmat Kaav

Option-II Sufi Poetry

- (a) Cultural Background
- (b) Sufi Mysticism
- (c) Imagery in Sufi Kaav
- (d) Poetics of Sufi Kaav
- (e) Lyricism in Sufi Kaav

**SYLLABUS
MASTERS OF PHILOSOPHY (URDU)
PAPER-III**

URDU

LITERARY HISTORY OF URDU

PART II Section I (Marks 50)

- 1) Meaning and Scope of literary History
- 2) Different concepts of Urdu literary History
- 3) Primary and secondary sources of writing of Urdu literary history. e.g. Tazkiras, Catalogues, Biographies, Auto biographies, Guldastas, Khutut, Mukhtootat.
- 4) Special features of the Literary Histories of Urdu viz.
 - i) Aab-e-Hayat ii) Sher-ul-Hind
 - iii) Gul-e-Rana iv) Tareekh Adab-e-Urdu (Askari)
- 5) Importance of History of regional literature with special reference to:
 - i) Deccan mein Urdu (Hashmi)
 - ii) Madras mein Urdu (Hashmi)
 - iii) Maysore mein Urdu (Ameena Khatoon and Habibunnisa Begum)
 - iv) Bambai mein Urdu (Maimoona Dalvi)

Section II (Marks 50)

- 1) Literary periods of Urdu literature and their importance.
- 2) Literary schools and their significance.
- 3) Literary movements in Urdu Literature with special reference to:
 - i) Fort William College
 - ii) Delhi College
 - iii) Aligarh Movement
 - iv) Progressive Movement
 - v) Neo-modernism

References

- 1) Urdu Adab ke Irtequa Mein Adbi Tahreekon aur Rujhano ka Hissa
by Manzar Azmi
- 2) Aligarh Tahreek Samaji aur Siyasi Mutaleya by Mazhar Husain
- 3) Jadidyat by Naresh Nadeem
- 4) Tahreek Adab-e-Urdu [I to V vol.] Edited by Prof. Gayan Chand Jain

**SYLLABUS
MASTERS OF PHILOSOPHY (URDU)
PAPER-IV**

STUDY OF DECCANI LITERATURE

PAPER III

PART I (Marks 50)

Title of Paper: Study of Deccani Literature

Following topics to be studied;

- 1) Beginning and evaluation of Urdu literature in Deccan/
- 2) Salient features of Deccani linguistics
- 3) Form of Urdu literature "Mathnavi".
- 4) Qutub Shahi Era (Special study of only Mathnavi)
 - a) Quli Qutub Shah
 - b) Mullah Wajhi
 - c) Gawasi
 - d) Ibn-e-Nishati
 - e) Wali Deccani
- 5) Aadil Shahi Era
 - a) Nusrati
 - b) Nizami

Reference

- 1) Deccani Adab ki Tahreek by Mohiyuddin Qadri Zor
- 2) Urdu Masnavi ka Irtequa by Abdul Qadir Suruari
- 3) Nusrati by Maulvi Abdul Haque
- 4) Quli Qutub Shah by Masoof Husain
- 5) Hayat-e-Wajhi by Dr. M.N. Saeed

Part II (Marks 50)

Title of the Paper: History of Urdu Literary Criticism and Research

Methodology

- 1) Importance of Literary Criticism
- 2) Principles of Urdu Literary Criticism
- 3) Various thoughts of school of Literary Criticism
- 4) Importance of Urdu Tazkera
- 5) Relationship between Criticism and Research
- 6) Relationship between Literature and Criticism
- 7) Principles of Research Methodology
- 8) Special study of Urdu Critic & Researcher

Hali, Niyaz, Al Ahmad Suroor, Shamsur-rahman Farooqui,
Mohiyuddin Qadir Zor, Qazi Ab, Wadood, Mamood Shirani, Imtiyaz
Ali Arshi.

Reference

- 1) Adbi Tahquique Masa'el aur Tajruba by Rasheed Hasan Khan
- 2) Jadeed Urdu Tanquid Usool aur Nazariyat by Dr, Sharib Rudelvi
- 3) Urdu Tanquid Hali Se Kaleem Tak by Sayyad Nawab Kareem
- 4) Mohiyuddin Qadri Zor by Khalique Anjum

- 5) Qazi Abdul Wadood by Wahab Ashrafi
- 6) Arshi Saheb ke Khutoot by Zakariya Jeelani

SYLLABUS
MASTERS OF PHILOSOPHY (FINE ARTS)
PAPER-III

FINE ARTS

Aesthetics and Principles of Art Appreciation

Unit-I

- i) Theory of imitation-Plato and Aristotle German Idealism-Kant, Hegal, Baumgarten
- ii) Theory of Intuition and Expression-Croce Theory of Romanticism-Schopenhaur and Nietzsche
- iv) Theory of Empathy-Veronlee
- v) Theory of Symbolism-White Head
- vi) Art and Communication-Leo Toistoy

Unit-II

Concept and Principles of Rasa in IndianAesthetics.Theory of Meaning (Dhavani) by Abhinava Gupta.Aesthetical aspect of sixlimbs Kamsutra.

Unit-III

Meaning of Art,Art and Society, Art and Religion, Art and Nature, Abstraction in Art

Unit-IV

Elements of Art-Painting

- (a) Space
- (b) Form
- (c) Line
- (d) Colour
- (e) Tone
- (f) Texture
- (g) Hue
- (h) Value
- (i) Intensity

Unit-III

Three questions will be given and one will have to attempt.

Unit-IV

Three questions will be given and one will have to attempt.

Unit-V

Each question carry equal marks i.e. 16 marks each.

Paper-III Portraiture in Painting

Head study from live models of different age group (Male and Female). Two enlargements from photographs.
Examination time : 18 hrs. (6 hrs. per day)

Maximum marks : 100 (examination 70 session 30)
Size : 18"×24" or 16"×20"
Medium : Oil colour/acrylics on canvas or oil sheet.

Paper-IV Composition/copy of great masters

Compositing a painting on a given subject based on principals of organization emphasis on individual organiza tion studies of f igures single or in group composition. Two Paintings of any great masters work will be done.

Examination time : 18 hrs. (6 hrs. per day)
Maximum marks : 100 (examination 70 sessional 30)
Size : 24"×30" or 30"×40"
Medium : Oil colour/acrylics on canvas or oil sheet.

Books Recommended

1. Aesthetics Dr. Rajendera Bajpai
2. Art & Beauty Dr. J. Sawaminathan
3. Kala Bodh evam
Sondarya Dr. Sukra Dev Shotriya
4. Bhartiya Sondrya
ki Bhumika -do- Dr. Nagender
5. Sondrya Shastra -do- Dr. Mamta Chaturvedi
6. Kala aur Sondrya -do- Dr. G.K. Aggarwal
7. Kala aur Sidhant -do- Dr. G.K. Aggarwal
(Hindi Version)

**SYLLABUS
MASTERS OF PHILOSOPHY (FINE ARTS)
PAPER-IV**

HISTORY OF INDIAN PAINTING

Unit-I

Pre-Historic Paintings, Indus Valley Designs, Ajanta, bagh Badami, Ellora, Wason Singheria.

Unit-II

School of Books- Illustration and Eastern Indian, School (Pala) Western Indian School (Jain or Apbahrasna).

Unit-III

Miniature Schools Mughal (early Mughals Akbar to Aurangjeb Rajasthani) (Mewar, Bikaner, Jodhpur, Kota-Bundi, Krishangarh and Jaipur), Pahari (Basoli, Kangra, Chamba, Kullu, Mandi).

Unit-IV

Company School

Note :- Question paper will consist of the four sections.

Section-I

Consisting of two questions with ten parts 30-50 words each part of 2 marks each covering the whole Unit-1

Section-II

Two questions will be attempt out of four in the unit-II.

Section-III

Four questions will be given and two will be attempt.

Section-IV

Two question will be given and one will be attempted All question carry equal marks i.e. 16 marks each.

Books Recommended

1. Bhartiya Chitrakala ka Itihas Dr. Avinash Bahadur harma, Barailly.
2. Kala aur Kalam Dr. Giri raj Kishore ggarwal, Aligarh
3. Kala Aur Vilas Dr. Ram Avtar Aggarwal, ayal Book, Depo t, eerut.
4. Indian Painting Percy Brown, Delhi.
5. Indian Painting Dr. C. Siva Ram- Murty, ational Book Trust, elhi.

**SYLLABUS
MASTERS OF PHILOSOPHY (MUSIC)
PAPER-III**

MUSIC

History of Indian Music

Unit-I

1. Study of the following terms from ancient times to the present : wara, Grama, Murchana, Raga, Male Gamaka, Sthaya, Tal, Taan
2. Detailed study of the following musical forms: hamar, Tarana, Tappa, Chaturang, humri, Quwwali, Ghazal, Lok Geet.

Unit-II

1. Aesthetics of Indian Music
2. Appreciation and criticism of Music
3. Theory of Rasa

Unit-III

1. Social and cultural aspects of Music
2. Music and Religion
3. Psychology of Music

Unit-IV

1. Modern trends in Hindustani Music
2. Teaching of Music : Traditional (Gharana Parampara) versus institutional training.
3. Verities of Instruments : Sarangi, Surbahar, Sursingar, Violin, Guitar.

STAGE PERFORMANCE (PRACTICAL)

1. Performance of half an hour's duration by the candidate. Choice of Ragas should be from the list given below :

- a) Rageshwari
 - b) Yaman
 - c) Nand
 - d) Malkauns
 - e) Jaunpuri
 - f) Bhairav M.M. : 50
- 2.** One Dhrupad/Dhamar, one Gat in other than teen tal will have to be present by the student at the time of stage performance with Laykaris. M.M. : 20
- 3.** Thumr/Tappa/Dhun or ability to sing play composition in Rag Khmaj, Peelu, Kafi, Bhairavi. M.M. : 10