

DEPARTMENT OF BUSINESS MANAGEMENT

UNIVERSITY OF CALCUTTA

SYLLABUS – MBM/MBA

ANNEXURE – I

CONTENTS OF PAPERS FOR SEMESTER – I (JULY – DECEMBER)

PAPER NO.	TITLE	MODULES
CP – 101	Management Principles, Process.	I = Management Principles II = Management Process
CP – 102	Organisation Behaviour and Management of Change	I = Organisation Behaviour II = Management of Change
CP – 103	Managerial Economics – I (Micro)	I = Micro Economics - I II = Micro Economics – II
CP – 104	Managerial Economics – II (Macro)	I = Macro Economics - I II = Macro Economics – II
CP – 105	Statistical Methods	I = Statistics for Managerial Decision – I II = Statistics for Managerial Decision – II
CP – 106	Accounting for Managers	I = Financial Accounting II = Cost Accounting
CP – 107	Ecology, Ethics and Business	I = Ecology & Business II = Business Ethics
CP – 108	Fundamental of Computers	I = Introduction & Basics of Computer Hardware II = Programming Principles & Business Data Processing

CONTENTS OF PAPERS FOR SEMESTER – II (JANUARY - JUNE)

PAPER NO.	TITLE	MODULES
CP – 201	Business Environment	I = Non Economic Environment II = Economic Environment
CP – 202	Business Policy and Strategic Management	I = Business Policy II = Strategic Management
CP – 203	Financial Management	I = Financial System II = Financial Decision Process
CP – 204	Marketing Management	I = Marketing Management - I II = Marketing Management – II
CP – 205	Production Management & Operations Research Techniques	I = Production Management II = Operations Research Techniques
CP – 206	Human Resource Management	I = Human Resource Management – I II = Human Resource Management – II
CP – 207	Research Methodology & Econometrics	I = Research Methodology II = Econometrics

CP – 208	MIS and Computers Applications	I = Management Information System (MIS) II = Business Communication
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CONTENTS OF PAPERS FOR SEMESTER – III (JULY - DECEMBER)

MARKETING MANAGEMENT

OPMKT – 301	Consumer Behaviour	Module I = Consumer Behaviour- I Module II = Consumer Behaviour II
OPMKT – 302	Advertising Management – (I) & Sales Promotion – (I)	Module I = Advertising Management – I Module II = Sales Promotion – I
OPMKT – 303	International Marketing	Module I = International Marketing & International Business Module II = Trans National Corporation in International Market
OPMKT – 304	Sectoral Marketing Management	Module I = Non-profit Institutions Module II = Rural Marketing
OPMKT – 305	Strategic Marketing & Services Marketing	Module I = Strategic Marketing Module II = Service Marketing
OPMKT – 306	Industrial Marketing	Module I = Industrial Marketing Module II = Logistics in Marketing

MINOR PAPERS - 301, 302

OPERATIONS MANAGEMENT AND SYSTEMS ANALYSIS

OPOMS – 301	Quantitative Techniques and Control – I	I = Linear Programming, Transportation and Assignment Problems II = Inventory Management and Game Theory
OPOMS – 302	Application Software Development	I = Structured Systems Analysis and Design II = DBMS
OPOMS – 303	Advanced Mathematics, Network Analysis & Project Management	I = Advanced Mathematics II = Network Analysis & Project Management
OPOMS – 304	Reliability, Sequencing & Replacement Model	I = Reliability Theory II = Sequencing & Replacement Model
OPOMS – 305	Principles of Operating Systems and Data Structure & Algorithms	I = Principles of Operating Systems II = Data Structure & Algorithms

OPOMS – 306	E-commerce Programming Languages & Development of Internet Applications	I = E-commerce Programming Languages II = Development of Internet Applications
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MINOR PAPERS - 301, 302

FINANCIAL MANAGEMENT

OPFM – 301	Accounting for Management	I = Management Accounting II = Management Control System
OPFM – 302	Indian Financial System	I = Financial Institutions in India II = Financial Market & Instruments
OPFM – 303	Financial Economics	I = Economics & Management of Financial Services II = Financial Derivatives
OPFM – 304	Cost Management	I = Advanced Costing II = Working Capital Management
OPFM – 305	Tax Management	I = Income Tax Laws II = Tax Planning
OPFM – 306	Project Management & Control	I = Project Management & Control – I II = Project Management & Control – II

MINOR PAPERS - 301, 302

HUMAN RESOURCE MANAGEMENT

OPHRM – 301	Managing Interpersonal & Group Process	Module I = Interpersonal Relationship Module II = Group Dynamics
OPHRM – 302	Human Resource Management	Module I = Man Power Planning Module II = Selection & Recruitment
OPHRM – 303	Labour Economics	Module I = Wage Theory Module II = Characteristics of Labour in Less developed Countries
OPHRM – 304	Management of Industrial Relations	Module I = Industrial Relations Module II = Trade Unionism
OPHRM – 305	Cross & Global Human Resource Management	Module I = The Role of Culture Module II = HRM in the Modern Era

OPHRM – 306	Human Resource Accounting & Compensation Management	Module I = Human Resource Accounting Module II = Compensation Management
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MINOR PAPERS - 301, 302

CONTENTS OF PAPERS FOR SEMESTER – IV (JANUARY - JUNE)

MARKETING MANAGEMENT

OPMKT – 401	Sales Management & Retail Management	Module I = Theories of Selling & Management Module II = Retail Management
OPMKT – 402	Market research & Assessment	Module I = Sampling Techniques Module II = Market Share & New Product Decision Theories
OPMKT – 403	Market Forecasting Techniques	Module I = Trends & Forecast Module II = Box – Jenkins Models& other forecasting techniques
OPMKT – 404	Advertising Management – (II) & Sales Promotion – (II)	Module I = Advertising Management – II Module II = Sales Promotion–II: Integrated Promotion & Public Relation

MINOR PAPERS - 401, 402

OPERATIONS MANAGEMENT AND SYSTEMS ANALYSIS

OPOMS – 401	Production and Operations Management Principles	I = Production Management Principles II = Operations Management Principles
OPOMS – 402	Programming Languages & Computer Networking Principles	I = Programming Language C++ II = Computer Networking Principles
OPOMS – 403	Quantitative Techniques and Control – II	I = Non Linear Programming, Integer Programming, Goal Programming, Stochastic Programming II = Queuing Theory

OPOMS – 404	Structured Query Languages & Software Engineering	I = Structured Query Languages II = Software Engineering
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MINOR PAPERS – 401, 402

FINANCIAL MANAGEMENT

OPFM – 401	Financial Management	I = Financial Decision Analysis II = Strategic Finance
OPFM – 402	Investment Management	I = Investment Environment II = Security Analysis
OPFM – 403	International Finance	I = International Finance-I II = International Finance-II
OPFM – 404	Portfolio Management	I = Bond Analysis & Management II = Portfolio Management

MINOR PAPERS - 401, 402

HUMAN RESOURCE MANAGEMENT

OPHRM – 401	Human Resource Development	Module I = Development & Training Module II = Evaluation & Appraisal
OPHRM – 402	Human Resource Counselling & Discipline	Module I = Counselling Module II = Disciplinary Activities
OPHRM – 403	Legal Framework Governing Human Relations	Module I = Industrial Law Module II = Labour Welfare Measures
OPHRM – 404	Industrial Psychology	Module I = Industrial Psychology Module II = Industrial Sociology

MINOR PAPERS - 401, 402

❖ CP 405 = Project Work

**❖ CP 406= Project Viva (50 marks)
+ General Viva (50 marks)**

Note: CP = Compulsory Paper

OPORS = Optional Paper Operation Research & System Analysis

OPFM = Optional Paper Financial Management

OPMKT = Optional Paper Marketing Management

OPHRM = Optional Paper Human Resource Management

Semester – I

❑ Paper CP 101: Management Principles, Process

Module – I Management Principles

1. Business and its objectives
2. Forms of Business Organization
3. Business Combinations
4. Corporate Governance
5. Taylor, Fayol
6. Human Relations School
7. Systems Theory
8. Contingency Theory
9. Contemporary Issues

Module – II Management Process

1. Nature of Functions of Management
2. Planning
3. Organization
4. Delegation and Decentralization
5. Controlling
6. Leadership
7. Motivation

❑ Paper CP102: Organization Behaviour and Management of Change

Module – I Organization Behaviour

1. Meaning and Concept of Organisational Behaviour.
2. Organisation System, Organisation Structure.
3. Individual Behaviour in the Organisation
 - Values, Attitudes, Personality, Emotion & Perceptions.

4. Group Behaviour in the Organisation.
- Group Behaviour, Group Decision Making
5. Organisational Development
- Organisational Change
6. Leading and Motivation.

Module – II Management of Change

- 1 Necessity of Change
- Resistance of Change
- 2 Types of Change. Conflict in Management of Change.
- 3 Influence of Change in Organisational Behaviour, Innovations in Management Process.

□ Paper CP103: Managerial Economics - I

Module – I Micro Economics – I

1. Theory of production – Total, average and marginal product curves
2. Theory of cost – Total, average and marginal cost curves
3. Concept of revenue – Total, average and marginal revenue curves
4. Theory of firms – Traditional theory
5. Theory of Firms – Modern theory – Alternative goals of firms
6. Market morphology – Perfect completion – imperfect completion – monopoly, monopolistic competition, oligopoly,
7. Industrial organization - Product quality, non-linear pricing, advertisement, brand proliferation, principal agent model, entry deterrence.

Module – II Micro Economics – II

- 1 Utility theory
- 2 Theory of consumer behaviour – Indifference – preference analysis, derivation of demand curves – elasticities of demand – slutsky equation
- 3 Welfare theory – Pareto optimality

References:

1. Henderson & Quandt – Macro Economics – A Mathematical Approach
2. Koutsoyiannis – Modern Micro Economics
3. Cohen & Cyert – Theory of Firm
4. Curwen – Theory of Firm
5. Curwen – Managerial Economics
6. K.Basu – Lectures in Industrial Organization
7. Hal Varian – Intermediate Microeconomics
8. Mankiew – Managerial Economics
9. David Kreps – A course in Microeconomics

□ Paper CP 104: Managerial Economics - II

Module – I Macro Economics – I

1. National Income and its accounting; GNP deflator; different price indices & their relations; GNP & Welfare
2. Income determination in closed economy – saving investment equality – consumption function & effective demand – multiplier process – Lags
3. Determinants of demand for money; determinants of supply of money; instruments of monetary control – role of banks
4. Income determination in IS-LM framework – Fiscal policy vs. monetary policy – conflicts & compatibility

Module – II Macro Economics – II

- 1 Aggregate supply – Determinants of Labour market equilibrium
- 2 AD-AS model – Response to demand management policies – the fiscalist – monetarist debate – The free market argument – asymmetric self-adjustment process – role of & need of government intervention in the market process
- 3 Inflation as a self-liquidations process – demand-pull & cost-push factors – role of expectations – Phillips curve - Long run supply curve
- 4 Income determination in the open economy under fixed and flexible exchange rates – fiscal; monetary & foreign exchange policy at an interactive level

References:

1. Samuel Son, Paul & Nordhans – Economics
2. Robert Gordon – Macro economic
3. Lipsy R. G. – Introduction to Positive Economics
4. Dornbusch & Fisher – Macro economics

❑ Paper CP 105: Statistical Methods

Module – I Statistics for Managerial Decision – I

Collection and presentation of data; Frequency Distribution; Measures of Central Tendency, Dispersion, Skewness & Kurtosis, Correlation & Regression, Time-series Analysis, Index Number Analysis.

Module – II Statistics for Managerial Decision – II

Probability Theory and Probability Distributions – Binomial, Poisson, Normal and Exponential; Linear Programming – basic Concepts, Model Formulation, Solution Methods, Duality; Introduction to some Basic Quantitative Methods Packages.

References:

1. Chandha, N.K. *Staistics for Behavioral and Social Scientists*, Reliance Publishing House, Delhi, 1996
2. Gupta, S. P. and Gupta M. P. *Business Statistics*, new Delhi, Sultan Chand, 1997
3. Kazmier, L. J. and Pohn, N. F. *Basics Stastics for Business and Economics*. New York, McGraw Hill, 1988.
4. Levin Richard L. and Rbin David S. *Statistics for Management*. New jersey, Prentice Hall Inc., 1995.

5. Narag, A.S. *Linear programming and Decision Making*. New Delhi, Sultan Chand, 1995
6. Sharma, J. K. *Fundamentals of Operations Research*, Mac Millan Publishers, 1990
7. Terry, Sineich, *Business Statistics by Examples*. London, Collier Mac Millan Publishers, 1990.

❑ **Paper CP 106: Accounting for Managers**

Module - I Financial Accounting

1. Accounting Concepts and conventions
 2. GAAP & Industrial Accounting Standards
 1. Uses of accounting information
 2. Double entry system – P & L, B/ S, CFS
 3. Inventory Valuation and Depreciation and their treatment in Balance Sheet.
- Corporate financial reporting India & Accounting standards.
4. Financial Statement Analysis.

Module – II Cost Accounting

1. Management Accounting Concepts.
Need, Importance and Scope of Management Accounting.
2. Budgetary Control, Performance Budgeting Zero Base Budgeting.
3. Variance Analysis
4. Contribution Analysis – BE Analysis
5. Cost Sheet

❑ **Paper CP 107: Ecology, Ethics & Business**

Module – I Ecology & Business

Basic Issues in Ecology, need for preservation, Environmental Management: Fundamentals-Sustainable Development, Implications of human population growth, Limits to growth, Environment and Business Schools; Energy Management: Fundamentals – Fossil fuels use, Energy production and trade, Energy balance; Ecosystem concepts: Basic Concepts and their application in Business, Industrial Ecology and Recycling Industry; Environmental Management System: EMS Standards, ISO 14000. Environmental Auditing. Clearance/Permissions for establishing industry; Environmental Management & Valuation: Environmental Accounting, Economics — Environmental Taxes Shifts, Green Funding, Corporate Mergers, Environmental Management Trade Debt and Environment, GATT/WTO Provisions; Environmental Laws: Acts, Patents, IPRS, Role of NGO's, PIL; Pollution & Waste Management – Air, Water, Land Pollution, Trade in Wastes; Water, Forest & Bio-diversity Management: Water Resources Dams and their role; Forest products and Trade. Role of Bio-diversity in International Trade.

Module – II Business Ethics

- Managerial myopia regarding ethical behaviour in business; Significance of Business Ethics; Ethics, morality and law; Contemporary ethical challenges in business
- Ethics as a strategic response in business; Values and vision in the strategic management process

- Qualities of Ethical Leadership; Approaches to Ethical Thinking: teleological, deontological, virtue-based, and holistic
- Ethical Dilemma: nature, levels and significance; Dilemma resolution process; Important areas of managerial dilemmas
- Ethical management tools: Whistle-blowing; ethical audits; ethics committees; ethics strategy

❑ **Paper CP 108: Fundamentals of Computers**

Module – I Introduction & Basics of Computer Hardware

Information & Processing: Data, info, logical concepts of data-entities, attributes, relationships; physical concepts – record, file, data processing, different types of data processing, different types of reports, transaction processing, word and text processing, graphics, office automation.

Elements of Computer Processing Systems: Elements of a computer System, Hardware, Software and classification of computers.

Hardware features and use: CPU, I/O devices, storage devices and media, generations of computers, Analog & digital computers, development of personal computers – Super computing, parallel processing computers.

Computer arithmetic and Number system: Decimal nos. system, binary no. system, fixed point representation, floating point representation, octal and hexa decimal representation.

Basic concepts of codes, Boolean algebra and logic gates

BCD, Gray code, excess-3 code, Boolean algebra, switching algebra, de-morgan's theorem, shannon's theorem, Minimization of switching functions using, K-map, Quine-mcelansky method, Iterative consensus method, design of half adder/half subtractor, full adder/full subtractor etc., logic gates, flip flops.

Computers and communication coordination: Need for data transmission over distances, methods of data transmission, band and band width, digital and analog transmission, serial and parallel data transmission, modem, communication protocols – synchronous and asynchronous, allocation of channels multiplexing – time division, space division. Frequency division, LAN, WAN, DDP, Real-time online systems.

Module – II Programming Principles & Business Data Processing

Task analysis – decision tables: Steps in programme development, division tables, flow charts, errors in programming.

Programming language classification: Machine language, assembly language, high level languages upto 4GL.

Programming techniques: Top-down and bottom up design and implementation; modular design and programming, structured design and programming, programming tools, program maintenance.

System software: Operating systems – its components; utility s/w packages – editor, sort, merge; compilers, interpreters, steps of compiler design.

Application packages: Single function – special purpose, general purpose; integrated function.

References:

1. Tanenbaum – Structured computer orgs – PHI
2. Lee, S. C. – Digital circuits and logic design – PHI
3. Malvins & Leach – Digital circuit design – Mc Graw Hill
4. Operating System Concepts – Abraham Salbervsehatz
5. Davis Gries – Compiler construction for digital computers
6. Tanenbaum A. S. – Computer network – PHI
7. Hawryszkiewicz L. T. – Intro to SAD - PHI

Semester – II

□ Paper CP 201: Business Environment

Module – I Non Economic Environment (Socio Political Cultural Legal)

1. Nature of Industrial Sociology
2. Social Organization, Work Organization
3. Occupations in Indian Society
4. Human & Cultural variables in organizations
5. Cultural differences and managerial implications
6. Cultural research methodologies and Hoffstede's Hermes Study.
7. Cultural leadership and decision-making
8. Cultural communication and negotiation.
9. The Indian Contract act, 1872: Essentials of a valid contract, void agreement, performance of contracts, Breach of contracts, Quasi Contracts
10. The Sale of goods Act, 1930: Formation of a contract, rights of an unpaid seller.
11. The Negotiable Instruments Act, 1881: Nature & Types, Negotiations and arbitration.
12. The Companies Act, 1956: Nature and types of companies, formation, memorandum and articles of association, prospectus, allotment of shares, share and share capital, membership, borrowing power, management and meetings, accounts and audit, compromise arrangements and reconstruction, prevention of oppression and mismanagement, winding up.
13. Consumer Protection Act.
14. Cyber Laws.

References:

1. Avtar Singh. Company Law. 11th ed. Lucknow, Eastern, 1956.
2. Khergamwala, J S. The Negotiable Instrument Acts, N M Tripathi, 1980
3. Ramaiya, A. Guide to the Companies Act. Nagpur, Wardha, 1992.

4. Shah, S M Lectures on Company Law, Bombay N M Tripathi, 1990
5. Tuteja, S K Business Law for Managers. New Delhi, Sultan Chand 1998.

Module – II Economic Environment (National & International)

1. Indian experience in development & planning in post-independence period.
2. Industrialisation in the pre-liberalisation era – policies & their impacts.
3. Industrialisation in the post-liberalisation era – performance of the private sector under reforms.
4. Role & Performance of the public sector – disinvestment & restructuring.
5. Reforms in the financial & banking sector.
6. Reforms in the external sector – comparison of performances in the pre and post liberalization period.
7. International Business: An Overview – Types of International Business; The external Environment; The Economic and Political Environment, The Human Cultural Environment; Influence on Trade and Investment Patterns; Recent World Trade and Foreign Investment Trends; Balance of Payments Accounts and Macroeconomic Management: Theories and Institutions: Trade and Investment – Government Influence on Trade Investment; Determination of Trading Partner's Independence, Interdependence and Dependence; World Financial Environment; Cross-national Co-operation and Agreements; Tariff and Non-Tariff Barriers, WTO, Regional Blocks; International Firms; World Financial Environment; Foreign Exchange Market Mechanism; Determinants of Exchange Rates; Euro-currency Market; Offshore Financial Competitiveness; Export Management; Licensing; Joint Ventures Technology and Global Competition; Globalisation and Human Resource Development; Globalisation with Social Responsibility; World Economic Growth and the Environment: *Country Evaluation and Selection; International Business Diplomacy*; Negotiating an International Business, Issues in Asset Protection: Multilateral Settlements; Consortium Approaches; External Relations Approach.

References:

1. Uberoi, N. K. *Environmental Management*, Excel Books, A-rt, Narain, Phase – 1, New Delhi – 2000
2. Pandey, G. N. *Environmental Management*, Vikas Publishing House, New Delhi, 1997
3. Gupta, N. Dass. *Environmental Accounting*, Wheeler Publishing, 19, K.G. Marg, New Delhi, 1997
4. Mohanty, S. K. *Environment & Pollution Law Manual*, Universal Law Publishing, G. T. Karnal Road, New Delhi, 1996
5. Harley, Nick. *Environmental Economics*, Macmillan India Ltd., Ansari Road, New Delhi – 1997
6. Kolstad, Charles D. *Environmental Economics*, Oxford University Press, 2000
7. Uma Kapila *India Since Independence*
8. Soumyen Sikdar *Contemporary Issues in Globalisation*
9. Autar Krishen Koul *The General Agreement on Tariffs and Trade (GATT)/ World Trade Organisation (WTO) Law, Economics and Politics*

❑ **Paper CP 202: Business Policy and Strategic Management**

Module – I Business Policy

1. Objectives of Business Policy
 - Knowledge
 - Skill
 - Attitude
2. Importance of Business Policy.
3. Nature of Business Policy

Module – II Strategic Management

1. Strategic Management: An Overview.
2. Analysis of External and Internal Environment.
3. Organisational Culture and Objective Setting.
4. Identifying Strategic Alternatives Strategy Alternatives.
5. Strategy Evaluation and Selection.
6. Matching Strategy and Organisation Structure.
7. Implementing Strategy.
8. Strategic Control Process.
9. Control System.

References:

1. Robert S. Kaplan and David P. Norton, The Strategy Focussed Organisation, Harvard Business School Press.
2. Kazmi (jt author), Business Policy, Tata Mc Graw Hill.
3. Nitin Balwani, Strategic Management and Business Policy, Excel Books.
4. AIMA, Strategies for Competitiveness, Excel Books.
5. Dr. P. K. Gupta, Corporate Strategic Management, Everest Publishing.

❑ **Paper CP 203: Financial Management**

Module – I Financial System

1. Aims and objectives of Financial Management
2. Environment of Financial Management
 - Financial Instruments, Institutions and Markets in India (Primary & Secondary securities market), Financial Services
3. Sources of Corporate Finance

Module – II Financial Decision Process

- 1 Capital Structure and Cost of Capital

- 2 Investment Decision
- 3 Working Capital Management
4. Dividend Decision

❑ **Paper CP 204: Marketing Management**

Module – I Marketing Management - I

1. Nature and Scope of Marketing.
2. Marketing Information System and Marketing Research.
3. Consumer and Industrial Marketing.
4. Market Segmentation.
5. Targeting and Positioning.
6. Product Decisions: Product Mix, Product Life Cycle, New Product Development, Branding, Packaging Decisions, Pricing Methods

Module – II Marketing Management – II

1. Promotion Decisions.
 - a) Promotion Mix, b) Advertising, c) Sales Promotion, d) Publicity/Public Relations, e) Personal Selling.
- 2 Channel Management
 - a) Selection, b) Co-operation & Conflict Management.
- 3 Evaluation & Control of Marketing Efforts.
- 4 New Issues in Marketing.
 - a) Globalisation, b) Consumerism, c) Green Marketing, d) Legal Issues.

References:

1. Enis, B. M. *Marketing Classics: A selection of Influence Articles*, New York, McGraw Hill, 1991
2. Kotler, Philip and Armstrong. G. *Principles of Marketing*, New Delhi, Prentice Hall of India, 1997
3. Kotler, Philip, *Marketing Management: Analysis, Planning, Implementation and Control*, New Delhi, Prentice Hall of India, 1994
4. Ramaswamy, V. S. and Namakumari, S. *Marketing Management: Planning, Control*, New Delhi, MacMillan, 1990
5. Stanton, William, J. *Fundamentals of Marketing*, New York, McGraw Hill, 1994
6. Neelamegham, S. *Marketing in India: Cases and Readings*, New Delhi, Viakas, 1988

❑ **Paper CP 205: Production Management and Operations Research Techniques**

Module – I Production Management

- 1 Nature and Scope of Production and Operations Management.
2. Types of Manufacturing Systems and Layouts.
3. Workshop Layout Planning and Analysis.

4. Material Handling.
5. Production Planning and Control.
 - a) Mass Production, b) Batch/Job order Production.
6. Capacity Planning.
7. Process Planning, Scheduling, Work Study, Method Study, Work Management.
8. Work Environment – Industrial Safety, Safety Management.
9. Materials Management, Purchase Management, Stores Management.
10. Quality Control, Total Quality Management, ISO 9000.

Module – II Operations Research Techniques

1. Linear Programming – basic Concepts, Model Formulation, Solution
2. Methods, Duality; Introduction to some Basic Quantitative Methods Packages.
3. Transportation, Assignment & Game Theory
4. Inventory Analysis, Queuing
5. Project Management (PERT, CPM)
6. Replacement Analysis

❑ Paper CP 206: Human Resource Management

Module – I Human Resource Management – I

1. Human Resource Planning.
2. Job Analysis and Design.
3. Reinvestment and Selection.
4. Induction
5. Training & Development.

Module – II Human Resource Management – II

- 1 Performance Appraisal and Potential Evaluation.
2. Job Evaluation and Wage Determination.
- 3 Employee Welfare.
- 4 Industrial Relations and Trade Unions and Employee Empowerment.
- 5 Dispute Resolution and Grievance Management.

References:

1. Aswathappa, K. *Human Resource and Personnel Management*, Tata McGraw Hill, New Delhi, 1997
2. De Cenzo, D.A. & Robbins S. P. *BUSINESS MANAGEMENT*, 5th ed. New York, John Wiley, 1994
3. Guy, V. & Mattock J. *The New International Manager*, London, Kogan Page, 1993.
4. Holloway, J. ed. *Performance Measurement and Evaluation*, New Delhi, Sage, 1995
5. Monappa, A. & Saiyadain M. *Personnel Management*, 2nd ed., New Delhi, Tata McGraw Hill, 1996
6. Stone, Liroyed and Leslie W. Rue. *Human Resource and Personnel Management*, Richard D. Irwin, Illinois, 1984

❑ Paper CP 207: Research Methodology & Econometrics

Module – I Research Methodology

Nature and Scope of Research Methodology; Problem Formulation and Statement of Research Objectives; Value and Cost of Information – Bayesian Decision Theory; Organisation Structure of Research; Research Process: Research Designs – Exploratory, Descriptive and Experimental Research Designs; Methods of Data Collection – Observational and Survey Methods; Questionnaire Design; Attitude Measurement Techniques: Motivational Research Techniques; Administration of Surveys;

References:

1. Andrews, F. M. and S. B. Withey *Social Indicators of Well Being*. Plenum Press, N. Y., 1976.
2. Bennet, Roger: *Management Research*. ILO, 1993
3. Fowler, Floyd, J. Jr., *Survey Methods*, 2nd ed., Sage Publication, 1993
4. Fox, J.A. and P. E. Tracy, *Randomized Response: A Method of Sensitive Survey*, Sage Publication, 1986
5. Gupta, Sa. P. *Statistical Methods*, 3rd ed., Sultan Chand, New Delhi, 2001
6. Golden, Biddle, Koren and Karen D. Locke, *Composing Qualitative Research*, Sage Publication, 1997
7. Salkind, Neil J., *Exploring Research*, 3rd ed., Prentice Hall, NJ, 1997

Module – II Econometrics and Techniques for Data Analysis

1. The nature of Econometrics – Relationship between variables, Economics Model & Concept of Error in the World
2. Two variable models – Assumptions, Least Square Estimations and their properties, Correlation Coefficient, Analysis A Variance in Regression, Predictions, basic Concept of Orthogonal Estimates.
3. Extension of the two-variable linear model – Two variable non-linear Relationships
4. General Linear Model – Assumptions & their implications, least square estimations and the properties, Correlation matrix, Partial correlation. Co-efficient & programmes coefficients, significance test of the stimulates, ANOVA in programme
5. Multicollinearity – Concept, consequences of multicollinearity & its removal with special reference to demand analysis.
6. Sample Design; Selecting and Appropriate Statistical Technique; Field Administration of Surveys; Sample Design; Selecting an Appropriate Statistical Technique; Field Work and Tabulation of Data; Analysis of Data, Estimation, Testing & Inference:- Use of SPSS and other Statistical Software Packages; Advanced Techniques for Data Analysis – ANOVA,

References:

1. Econometrics Method: J. Johnston
2. Theory of Econometrics: A. Koutsoyiannis
3. Econometrics: G. S. Maddala

4. Generalized Linear Regression Model
 - Problems of Heteroscedasticity
 - Auto correlation
 - Use of Dummy Regression (Binary)
 - Co-integration
4. Pyndricks & Ruben field – Econometrics
5. Maddala – Econometrics
6. Gold Burger– Applied Econometrics

❑ **Paper CP 208: MIS & Computer Applications**

Module – I: Management Information System (MIS)

MIS: Definition, Concept, Characteristics, Factors of designing successful MIS, Steps involved in setting up MIS, Advantages of MIS, Problems involved in installing and operating MIS, MIS growth stages theory in an organizations, Limitations of MIS, Status of MIS personnel. Dimensions of information need at different levels of management, Uncertainty absorption & planning, organizing and controlling.

Decision Support System: Its characteristics, Ingredients, Formulation of programmed decision rules.

Reporting: General principles, Types of reporting, Considerations of developing management reporting system.

Information Systems for Functional Areas: Accounting information system, Financial information system, Marketing information system, Personnel information system, Production information system, Materials Handling information system.

Database Management System: Introduction, Facilities of database, Database Administrator, Abstract architecture for a database system – External level, Conceptual level, Internal level, Schema and Sub-schema, DBMS in operational steps, DDL, DML.

Data structures and corresponding operations – Relational approach, Hierarchical approach, Network approach, Relational approach – Relations, Tuples, Attribute, Domains, Cardinality, Idea of Normalization. Enterprise Management System/ Enterprise Planning Business Process Re-engineering.

Introduction to E-Commerce.

Module – II Business Communication

Computer and communication: Basic Information Theory, The information technology, The concept of global village, On-line information services, Electronic Bulletin board systems; The Internet, Interactive video, Communications channels, Communications networks, local networks, Managerial issues related to

telecommunications. Client/server computing, Communication servers, Digital networks, Electronic data interchange and its applications, Enterprise resource planning systems, Inter organizational information system, Value added network, Wireless networks. Managing in the market space, Electronic commerce and Internet, Applications of Internet, Internet and Extranet in business organization, Using internet for business EIS, Internet as a vehicle for transacting business.

References:

- 1) Murdick & Ross – MIS – PHI
- 2) George M. Scot – Principles of MIS – McGraw Hill
- 3) Date C. J. – Database Management System
- 4) Basandra Suresh K. – Computer systems today – Wheeler.

Areas of Specialization

OPERATIONS MANAGEMENT & SYSTEM ANALYSIS

❑ **Paper OPORS –301(Minor) Quantitative Techniques and Control – I** **Module I: Linear Programming, Transpiration & Assignment Problems**

Linear Programming: Formulation of the problem, Graphical solution methods, General linear programming problem, Matrix formulation of general LPP, Simplex method, Fundamental properties of solutions, Simplex algorithm, Artificial variables, Charnes method of energies, Two phase simplex method, problem of degeneracy and cycling, Duality in linear programming, Fundamental properties, Dual simplex method, Revised simplex method, Standard form for revised simplex method, Bounded variables, Fusibility condition, Sensitivity analysis, Discrete changes in the different vectors, Structural change in LPP.

Transportation problem: Initial basic feasible solution by North-west corner rule, Matrix minima method, VAM approximation method, optimality test.

Assignment problem: Assignment algorithm, unbalanced assignment problem, traveling salesmen problem.

Module II: Inventory Management and Game Theory

Inventory Management - Introduction, Techniques of Inventory Control with known demand, Problem of EOQ with uniform demand, with finite rate of replacement, with shortage. Production instantaneous, multi-item deterministic problem, techniques of Inventory Control with uncertain demand, determination buffer stock, re-order level. Techniques of Inventory Control for stochastic problems, stochastic problem with

uniform demand, discrete and continuous cases, problems of price breaks and other constraints.

Game Theory – Strategic and normal form representation of a game, Non cooperative game theory, Pure and Mixed strategies, Solution techniques of games: Iterated Dominance Method, Maximin minimax Method, Graphical Method, Nash's Technique, LP Method, Backward Induction, Introduction to Cooperative game theory.

❑ **Paper OPORS – 302 (Minor) Application Software Development Systems**

Module – I SSAD

Systems concept and its development, Structured analysis & Design, Systems development life cycle, Tools of structured analysis & design – Context diagram, E-R diagram, Data flow diagram, Data dictionary, Pseudo code, Decision tables, Decision trees. Data capacity, file organization, program design, system control and implementation, system documentation and standards.

Module II DBMS

Basic Concepts: Data modeling for a database; Records and Files, Data independence, Data abstraction and data integration, The three level architecture, Instances and Schemes, Data base Manager/Administrator/Users.

Data Models: Entity –Relation diagram, Relational data model, DBTG proposal, Data definition and manipulation languages.

File Organisation: Serial files, Sequential files, Index-sequential files, Direct file, Secondary key retrieval, Indexing using Tree structures, Logical & Physical pointers, Record placement.

Multivalued Dependencies: Decomposition, Integrity, protection, Security, Concurrency, Control, recovery.

Concept of Distributed Data bases: Introduction, Networks, Data distribution, object naming, consistency, concurrence control, Distributed commitment and recovery, Dead lock in distributed systems, Distributed Query Programming.

❑ **Paper OPORS – 303 Advanced Mathematics, Network Analysis & Project Management**

Module I: Advanced Mathematics

1. Elements of Set Theory: (a) Set operation, (b) Laws of set operations - Association; -- Commutative Law --- Distributive Law with respect to union intersection, (c) De Morgan's Theorem.

2. Relation Algebra: (a) - Inverse Relation, -- Composition of Relations, ---Relational Algebraic Rules: (i) Function Relation, (ii) Ordering Relation, (c) Equivalence Relation.

3. Group, Ring, Field: Basic concepts & illustrations.

4. Vector Space.

5. **Linear Transformation from:** Finite Vector, Space to finite vector space – Matrix Algebra. Characteristic value problem. Quadratic form. Negative / positive definite matrix.
6. **Maximisation overtime:** Calculus of variation: Euler – Lagrange Equations application.
7. **Graph Theory:** (a) Concept of Utilization of graph, nodes edge, walk, open walk, closed walk, path, circuit, tree, cut set, cut. (b) Application of graph theory.

Module II: Network Analysis and Project Management

1. Network: Basic Concepts, Activities, Nodes.
2. Network, Critical path.
3. Critical Path Method.
4. PERT, PERT calculation.
5. Probability of meeting of schedule time.

References:

1. Kelly: General Topology
2. Hadley : Linear Algebra
3. Rudin: Principle of Mathematical Analysis
4. Gopal: Control Theory
5. Norsingh Deo: Graph Theory

□ Paper OPORS – 304 Reliability, Sequencing & Replacement Model

Module I: Reliability

Reliability Theory: Introduction. Definition of reliability constituents of reliability, concept of failure and failure rate. The bath – tub – curve, failure law, reliability and exponential law. The mean time between failures, measuring the MTBF, reliability computation of components probability of failure, reliability of the system, reliability of series configuration, reliability of parallel configuration, reliability of prediction. Definition of maintainability. Maintainability prediction, definition of equipment availability, which is important reliability, maintainability or availability? Increasing equipment availability, Manufacturer's reliability and maintainability programme, reliability engineering birth to death.

Module II: Sequencing & Replacement Model

Introduction to sequencing problems. Terminology, notations, assumptions etc, problems with n jobs and two machines, optimum sequencing algorithm, problems of n jobs and three machines, problems of n jobs and m machines.

Introduction. Replacement of items that deteriorate with time, maintenance cost increases with time, the value of money remains same over period and change over period, replacement of items fail completely, individual replacement policy, group replacement policy. Application of renewal theory.

❑ Paper OPORS – 305 Principles of Operating Systems & Data Structure and Algorithms

Module – I : Principles of Operating System

1. Overview :

History and Evaluation of Operating System

Introduction (What is an Operating System, Simple batch systems ,Multi programmed batched systems ,Time sharing systems ,Personnel-Computer Systems, Parallel systems ,Distributed systems ,Real-time systems)

Computer-system structures (Computer system operation ,I/O structures ,Storage structure ,Storage hierarchy ,Hardware protection ,General system architecture)

Operating system structures (System components ,Operating system services , System calls ,System programs ,System structures ,Virtual machines ,System design & implementation ,System generation)

1. Protection and security

Protection (Goals of protection ,Domain of protection ,Access matrix , Implementation of access matrix ,Revocation of access rights , Capability based systems ,Language based protection)

Security (The security problems ,Authentication ,One-time passwords , Program threats ,System threats ,Threat monitoring ,Encryption ,Computer security classifications, Example of security model)

2. Case studies: (The UNIX system, Windows NT)

3. Process Management:

Process (Process concept ,Process scheduling ,Operation on process, Cooperating process ,Threads ,Inter process Communication)

CPU scheduling (Basic concepts ,Scheduling criteria ,Scheduling algorithms, Multiple processor scheduling ,Real time scheduling ,Algorithm evaluation)

Process synchronization (Background ,The critical section problems Synchronization hardware ,Semaphores,Classical problems of synchronization Critical regions,Monitors ,Synnchronization in solaris2,Atomic transactions)

Deadlocks (System model,Deadlock characterization ,Methods of handling Deadlocks ,Deadlock prevention ,Deadlock avoidance ,Deadlock detection , Recovery from deadlock ,Combined approach to deadlock handling)

4. Storage management :

Memory management (Background ,Logical versus Physical address ,Swapping, Contiguous allocation, Paging ,Segmentation ,Segmentation with paging)

Virtual memory (Background ,Demand paging ,Performance of demand paging , Page replacement ,Page-replacement algorithms ,Allocation of frames Thrashing ,Other considerations ,Demand segmentation)

File system interface (File concept ,Access methods ,Directory structures, Protection ,Consistency semantics)

File system implementation (File system structure ,Allocation methods , Free space management, Directory implementation ,Efficiency and performance, Recovery)

5. I/O Systems:

I/O systems (Overview, I/O hardware ,Application I/O interface ,Kernel I/O

Subsystem, Transforming I/O requests to hardware operations ,Performance)
Secondary storage structure (Disk structure, Disk scheduling ,Disk management
Swap space management ,Disk reliability ,Stable storage implementation)
Tertiary storage structure (Tertiary storage device ,Operating system jobs,
Performance issues)

6. Distributed systems :

Network structures (Background, Motivation, Topology ,Network types
Communication ,Design strategies ,Networking examples)

Distributed system structures (Network operating systems, Distributed
operating systems ,Remote Services ,Robustness ,Design issues)

Distributed file systems (Background ,Naming and transparency ,Remote file
Access ,State full versus stateless service ,File replication ,Example
Systems)

Distributed coordination (Event ordering ,Mutual exclusion , Atomicity,
Concurrency control, Deadlock handling ,Election algorithms ,Reaching
agreement)

Module – II: Data Structure & Algorithms

Algorithms: definition and characteristics, pseudo- codes. Design: incremental, divide-and- conquer, greedy.

Growth of functions: different notation and their usefulness; fundamental properties of “big O” notation; best, worst and average case behavior.

Program design: structured and modular programming; non- recursive and recursive design-study comparison with simple examples.

Data structure: definition, fundamental data types, ADT

Concept of storage allocation: sequential and linked.

Array: definition, types representation in memory address function; examples- Upper, lower triangular and tri-diagonal arrays. Representation and manipulation of polynomials.

Pointers and Linked Lists: concept and representation; singly and doubly linked lists; non circular and circular, application- polynomial representation and addition, sparse matrix- representation and basic operation, operation with large integers.

Stacks: Representation in sequential and linked form, basic operations, application procedure calls and recursion, infix to postfix conversion and evaluation.

Queues: Representation with linear and circular arrays, basic operations; simple example on application in simulation. Priority queues.

String: Representation, basic operations; pattern matching problem – brute – force and KMP algorithm.

Graphs: Representation-of directed and undirected graphs, properties and manipulation; applications – Kuraskal’s algorithms, MST, DPS, BFS, topological sort.

Trees: General, binary trees: terminology (nodes and branches, height and depth, levels) types (complete, full, skewed); representation (array, linked), properties nodes and branches, number of nodes in a level, maximum number of nodes, internal and external path length – (minimum and maximum values), traversal algorithms; threaded trees. Application: comparison tree, syntax tree and parsing, game tree, Huffman code.

Binary search trees: Definition and properties, search, insertion and deletion algorithms; height balanced trees – definition, rotations and restoring balance, 2-3 trees, B-trees.

Linear and binary search: Algorithms, complexity.

Hashing: Definition; advantage and limitations; hash functions – design consideration, types and selection, collision resolution, techniques –open addressing with linear probing, simple chaining, double hashing; value of load factors. Dynamic hashing, perfect hash functions.

Sorting algorithms: Basic parameters, comparison based – bubble, insertion, selection, quick, tree, heap, merge; by distribution- radix; performance of algorithms.

Storage management: garbage collection; dynamic memory management – first fit, worst fit, buddy system.

Reference:

1. Tanenbum et al : Data Structures using C and C++ (PHI)
2. Corman et al : Introduction to Algorithms (selected topics only) (PHI)
3. Knuth : Art of Computer Programming (Vol. I & III) (A – W)

❑ Paper OPORS – 306: E-commerce Programming Languages & Development of Internet Applications

Module I: E-commerce Programming Languages

JAVA Programming & JAVA Database Connectivity

The Genesis of JAVA; Data types, Variables, Arrays, operators, Control statements, classes, Inheritance, Exception Handling, Multithreaded programming, String Handling, Event handling, Networking, The Applet class, Introducing the AWT: - Working with WINDOWS, graphics & Text. JAVA Database Connectivity.

Visual Basic:

Fundamental for Visual Basic 6.0: IDE, The elements of user interface, Event driven programming-properties, Methods, Events, Focus, Customizing the environment.

Visual Basic Projects: An application using different properties, An application with different forms, Project file, Form file, Executable file.

Visual Basic: The Language: Variables, Constants, Arrays, Collections, Procedure, Arguments, Function Return Values, Control flow Statements, Loop Statements, Nested Control Structures, The Exit Statement.

Different Forms: Appearance of forms, Designing Menus, Drag and Drop Operations.

Basic Active X Controls: The Text Box Control, The List Box and Combo Box Controls, The scroll Bar and Slider Controls, The file controls.

Drawing with Visual Basic 6.0: Graphic Control, Co-ordinate system, Graphics Methods, Optimization Issues.

Advanced Active X Controls: The common dialogs control, the tree view and list view controls.

Advanced Active X Controls: The Rich text box control, The MS Flex Grid control.

Optimization of VB Application

VB Compiler, Optimization of VB Code, Case studies.

References:

1. Petrutsos Evangelos – Mastering VB 6.0 – BPB Publication
2. Gary Cornell – VB 6.0 from the ground up, TMH
3. Donald R. P. & Oancea G – VB 6.0 from Scratch - TMH

4. Schildt Navghon – The Complete Reference JAVA – 2. TMH

Module II: Development of Internet Applications

1. Introduction to the Internet

- a) Client-Server Architecture
- b) Associated protocols (TCP/IP, HTTP, Usenet News and electronic mail)
- c) Related technology (names, address and Universal Resource Identifiers)
- d) Browser Technology.

2. Basic features of the Web

- a) Hypertext Markup Language (HTML)
- b) Limitations of HTML
- c) Introduction of SGML and other Markup Language

3. Client-side processing

- a) Forms
- b) Scripting with Java Script and VB Script
- c) Document Object Model (DOM)

4. Server-side Processing

- a) Active Server Page (ASP)

5. Extensible Markup Language (XML)

- a) XML in e-commerce
- b) Document type definitions (DTDs)
- c) XML schema
- d) XML path language (XPath)
- e) Extensible stylesheet language (XSL)

6. Server-side Processing

- a) Common Gateway Interface (CGI)
- b) Server scripts
- c) 3-Tier architecture and database connectivity

❑ Paper OPORS – 401 (Minor) Production and Operations

Management Principles

Module I: Production Management Principles

- 1. Nature and scope of Production and Operation Management. Concept and importance.
- 2. Types of systems and Layouts; Production Capacity Planning and Management, Plant Location and Plant Layout
- 3. Production Planning and Control
Demand forecasting for production, Product Development; Product and Process Analysis aggregate planning; production scheduling and control techniques and materials requirements planning
- 4. Project Management and Research Allocation
Project Management Techniques, Line of Balance

Resource Allocation – Linear Propagation and Computer application in
Production and Operation Management

Module II: Operations Management Principles

1. Inventory Concepts, Functions and Costs, Basic Inventory Models, Inventory Systems, JIT Quality Management, Statistical Quality Control, Quality Assurance, Concept of Acceptance Sampling, Control Charts, Total Quality Management, ISO 9000/2000. Keizen, Six Sigma, etc
2. Elements of Work Study
Introduction to work study: Principles and Methods of Study, Principles and Application of Time Study, Work Sampling and Development of Production Standard.
3. Maintenance, Value Analysis and Productivity
Maintenance Management; Types of Maintenance; Cost Consideration in Management; Value Analysis and Engineering Productivity and its measurement.
4. Work Environment
Industrial Safety – Accidents, the Causes and Effects of Accidents, Responsibilities and Organization of Safety, Safety Management.

❑ Paper OPORS – 402 Programming Languages & Computer Network Principles

Module – I Programming Language C++

1) C++: A bird's Eye View

- a) Introduction
- b) What is new in C++
 - i) Data encapsulation & abstraction
 - ii) Inheritance
 - iii) Polymorphism
 - iv) Stream Handling
 - v) Exception Handling
- c) Creating Applications
 - i) Creating and editing source files
 - ii) Compiling and linking

2) Data Types, Operators, and Expressions

3) Programme Structure

- a) Statements
- b) Blocks
- c) Control Statements
 - i) IF statement
 - ii) Switch Statement
- d) Loop Statements
 - i) For Loop

- ii) Do While Loop
 - iii) While Loop
- 4) Functions**
 - a) The Main Function
 - b) Function prototyping
 - c) Call by reference
 - d) Return by reference
 - e) Inline functions
 - f) Default arguments
 - g) Function overloading
 - h) Friend and virtual functions
- 5) Pointers**
- 6) Arrays & Strings**
- 7) Structures & Unions**
- 8) Classes & Objects**
 - a) Specifying a class
 - b) Defining data members and Member functions
 - c) Arrays in a class
 - d) Arrays of objects
 - e) Objects as function arguments
 - f) Returning objects
 - g) Local Classes
- 9) Constructors and Destructors**
 - a) Parameterized constructors
 - b) Multiple constructors
 - c) Constructors with default arguments
 - d) Dynamic initialization of objects
 - e) Copy constructor
 - f) Dynamic constructor
 - g) Destructors
- 10) Operator Overloading and type conversion**
 - a) Overloading
 - i) Unary operators
 - ii) Binary operators
 - b) Overloading binary operators using friends
 - c) Type conversions
- 11) Inheritance**
 - a) Defining derived classes
 - b) Inheritance
 - i) Single
 - ii) Multiple
 - iii) Hierarchical
 - iv) Hybrid
 - c) Virtual base classes

- d) Abstract classes

12) Polymorphism

- a) Pointers to objects
- b) THIS Pointer
- c) Pointer to derived classes
- d) Virtual Functions
- e) Pure virtual functions

13) Generic Programming with Templates

- a) Class Templates
- b) Function Templates
- c) Member Function Templates
- d) Overloading of Template Functions

14) Stream Handling

- a) Managing console I/O operations
 - i) Unformatted I/O operations
 - ii) Formatted console I/O operations
 - iii) Managing output with Manipulators
- b) Working with files
 - i) Classes for File Stream operations
 - ii) File pointers and their manipulations.
 - iii) Creating, opening, reading, writing and closing operations
 - iv) Sequential input and output operations
 - v) Random input and output operations

15) Exception Handling

- a) Basics of exception handling
- b) Exception handling mechanism

References:

7. Schildt Herbert – C++ Complete reference – TMH
8. Balaguru Samy E – Orp. With C++ – TMH
9. Ravichandran D – Programming with C++, TMH
10. Hubbard John – Programming with C++ - McGraw Hill.

Module – II Computer Networking Principles

Computer Networks – Concepts, Uses, Network Structure, Network architectures, OSI reference model services, Physical Layer, Medium access sublayer, Data link layer, Network layer, Transport layer, Session layer, Presentation layer, Application layer.

References:

1. Black Uyless – Computer Network – PHI
2. Bertsekas & Gallager – Data Network – PHI
3. Tanenbaum Andrews – Computer Networks - PHI

❑ Paper OPORS – 403 Quantitative Techniques and Control – II

Module – I Non Linear Programing, Integer Programming, Goal Programing, Stochastic Programeing

Non-linear Programming: General NLPP, Problems of constraint maxima and minima, Necessary and sufficient condition for maximum (minimum) of objective function, Saddle point problems, Kuhn-Tucker conditions – non-negative constraints, Quadratic programming, Wolfe's modified simplex method and algorithm, Beale's method and algorithm, Piece-wise linear approximation.

Integer Programming: Gomoy's All-IPP method and algorithm, Branch and bound technique and algorithm, Either or constraints, K-out-of-N constraints must hold

Goal Programming

Dynamic Programming: The recursive equation approach, Characteristics of dynamic programming, Solution of LPP of dynamic programming

Stochastic Programming.

References:

1. Budnik, Frank S., Dennis Mcleavey, Richard Mojena Principles of Operations Research, 2nd ed., Richard Irwin, Illinons-All India Travelller Bookseller, New Delhi, 1995
2. Gould, F J etc. Introduction to Management Science. Englewod Cliffs, New Jersey, Prentice Hall Inc., 1993
3. Taha, H A Operations Research – An Introduction, New York, Mc Millan, 1989

Module II: Queuing Theory

Introduction to Queuing Theory, Characteristics of queuing systems, input process, service mechanism, queue discipline, service channels, symbols and notations, distribution of inter-arrival times, service times, definition of transient and steady state, M/M/1 queuing system, MMC queuing systems, M/E_k/1 queuing system, M/G/1 queuing system

□ Paper OPORS – 404 Structured Query Languages & Software Engineering

Module I : Structured Query Languages

Related Model: Relational database, Relational algebra, Relationaal Calculus, Functional Dependencies, Normal forms.

Query Languages: SQL – data definition, data manipulation, views; formal and commercial query languages.

Query Processing: General strategies for query processing, Transformation into an equivalent expression, Expected size of relations in the response, Query improvement, Query evaluation and optimization.

ORACLE: Table creation, SQL forms, Joining two tables, Report generation, Application.

References:

1. C. J. Date – An introduction to Data base Systems Vol. I + II Addison, Wesley
2. Ulman, Jeffry D – Principles of Database System.
3. Korth & Silverschtz - DBMS
4. Robert Kruse – Data structure and program design – P.H.I.
- 2 5.Desai, Bipin C – An introduction to data base systems – Galgotin Publications Pvt. Ltd.
6. Oracle Manuals, Oracle corporation, USA.

Module II: Software Engineering

S/W Engineering: A preview; S/W: its nature and qualities, S/W Engineering principles, S/W design, S/W Verification, S/W production process, Management of S/W Engineering, S/W Engineering tools and environments.

References:

4. Hawryszkeiwycz I.T. – Introduction to SAD, PHI
5. Lee – Systems analysis & design – MCC publication
6. Senn, James A – Structured SAD
7. Processman – S/W Engg – A practitioner's approach – Mc Graw Hill
8. Ghezzi, Jozayeri, Mandrioli – Fundamentals of S/W Engg – PHI
9. Sommerville – S/W Engg – Adison Wesley

MARKETING MANAGEMENT

❑ **Paper OPMKT – 301 (Minor) : Consumer Behaviour**

Module – I Consumer Behaviour-I

Preliminaries

1. Changing Profile of the Society and its Relevance of Consumer Marketing
2. Consumer Marketing & Non-Consumer Marketing Organisational / Industrial Marketing
3. Interdisciplinary Nature of Consumer Market Analysis
4. Characterising Consumer Market
 - The Buyer or the Consumer
 - The Seller
 - The Product
 - Institutional / Organisational Character – Market Network

Consumer Behaviour Analysis /Buyer in the Consumer Market

5. Interdisciplinary Nature of Consumer Behaviour Analysis

- Economic Paradigm of Consumer
- Behaviour Analysis – Economists Models
- Limitation of Economists Models in Market Management Analysis

6. Psychographic Analysis of Consumer

7. Behaviour

- Motivation
- Learning
- Perception
- Attitude
- Personality

Socio-graphic Analysis of Consumer Behaviour

8. Culture

9. Sub-culture

10. Social Class

11. Reference Group

12. Face of Face Group

13. Family

14. Individual / Person himself

15. Incorporating External and Internal Factors: Consumer Behaviour Models

-Howard & Sheth

-Nicosia

-Blackwel and Engel

-Others

16. Characterising Behaviour Models as

- Input Output System
- Inter-active System
- Feed Back Mechanism

17. Consumer Decision Process

- Pre-decision Analysis
- Decision and Action
- Post-decision and Action Analysis

18. Specifics

- Analysis of Dynamics of Purchase and Consumption of Consumer Durable
- Analysis of Dynamics of Purchase, Consumption and Post-consumption Behaviour of Consumer Perishables – Issues of Inventories of Consumables.

Module -II Consumer Behaviour- II

19. Post-Purchase Behaviour of Consumers.

20. Impact of Short Term and Long Term Memory on Consumer Behaviour.

21. Consumer Behaviour specifically to E-marketing.

22. Consumer Behaviour in Rural Marketing.

23. Environmental Awareness and Impact on Consumer behaviour.

24. Asian Cultures and Values.

25. Driving Forces in Asian Consumer Behaviour.

References:

1. Leon G. Schiffman & Leslie Lazer Kankuk: Consumer Behaviour (Edition 6th) PHI – New Delhi
2. Loudon & Betta: Consumer Behaviour, McGraw Hill International, 2000
3. Glenn Walters and Blaise J. Bergiel: Consumer Behaviour, South Western Publishing Company, 1989.
4. Peter D. Benett and Harold H. Kassarian: Consumer Behaviour, PHI, New Delhi, 1996
5. Assael, H. Consumer Behaviour Marketing Action. Ohio, South Western, 1995
6. Hawkins, D I. etc. Consumer Behaviour Implications for Marketing Strategy. Texas, Business, 1995

❑ **Paper OPMKT – 302 (Minor) : Advertising Management (I) & Sales Promotion – (I)**

Module –I Advertising Management – I

1. Introduction – The field of Advertising Management. Advertising Planning and Decision Making
2. Objectives Setting and Market Positioning – Integrated Market Communication. Setting Goals and Objectives. How Advertising Works.
3. Media Strategy and Tactics – Media Alternatives and Media Selection. Budgeting and Media Tactics.
4. Broader Environment – Advertising its relation with Society. Ethics in Advertising. Global Marketing and Advertising.

Module – II Sales Promotion

1. Introduction – Defining Promotion and its scope
2. Promotion Mix – Consumer Promotion, Trade Promotion. Promotional Strategies – Joint Promotions, Extra Benefit Offers, Charities, Sponsorships, Games and Competitions, Celebrity Promotion & Events Management
3. Devising a Promotional Strategy and its evaluation
4. Direct Marketing

References:

1. George E. Belch & Michael A. Belch: Advertising & Promotion
2. Batra & Myers: Advertising Management, PHI
3. Scissors & Petray: Media Planning
4. A. D. Farbey: How to Produce Successful Advertising
5. Borden Marshall: Advertising Management
6. G. C. Beri: Marketing Research, TMH
7. R. Batra, J.G. Myers, D.A. Aaker: Marketing Management, PHI
8. F. Jefkins: Advertising, Macmillan

9. M. Mohan: Advertising Management, TMG
10. Kenneth. E. Clow and Baack Donald: Integrated Advertising Promotion & Marketing Communications - PHI
11. Hackley Chris, Advertising & Promotion – Sage

❑ **Paper OPMKT – 303 : International Marketing**

Module – 1 International Marketing & International Business

Part – A

1. International Marketing vis-à-vis Domestic Marketing
2. Selection of Foreign Markets
3. Market Entry Strategies
4. Market Coverage Strategies
5. International Product Decisions
6. International Pricing
7. International Distribution
8. Promotion in the International Market

Part – B

International Firm & International Business

9. Introduction – (MNC / TNC – International Firm)
 - Definition & Features
10. MNCs in Historical Perspectives
 - Genesis of MNC
 - MNCs in the late 20th Century
 - Emerging Features of MNCs in the 21st Century
11. Network of MNC Operations and the Organisational Structure of the MNCs
12. Why the MNCs go abroad?
 - Theory of Capital Transfer
 - Products Cycle Theory in International Movement of Capital
 - Export of Capital – Dynamics of Profit
13. The MNCs in the era of Globalisation of Capital
 - Structural Adjustment Programme in Post Bretton Woods Regime
 - Convertible Currency & Foreign Direct Investment in the era of liberalisation

Module – II Transnational Corporation in International Market

Part – A

14. Internalization of National Market
- Operators in an International Market
 - Transnational Corporations - an Operator
15. International Components in an International Market
16. Types of Operations of International Units in an International Market
18. Difference Forms of Trans National Corporation
 - Transnational Manufacturing Corporations

- Transnational Trading Corporations
- Transnational Service Corporations

Part – B

Theories and Protections in International Trade

19. Rational of International Trade
20. Autarky & Trade
21. Adam Smith's Theory of Absolute Advantage
22. David Ricardo's Theory of Comparative Advantage
23. Hecksher – Ohlin Formulations
24. Gains from Trade
25. Free Trade vs. Restricted Trade
26. Forms of Protection
 - Kinds of Tariff & Effects of Tariff
 - Arrangements for Tariff
 - Quotas, dumping & State Trading
 - Exchange Control
27. Globalization & WTO

References:

1. Warran J. Keegan: Global Marketing Management, PHI
2. Francis Cherunilam: International Business, Wheeler Pub.
3. Bo Sodersten: International Economics
4. Bhattacharya, B. Export Marketing. Strategies for Success. New Delhi, Global Business Press, 1991
5. Terpstra. Vem and Sarathy, R. International Business. New York, John Wiley, 1988
6. Onkvisit, Sak and Shaw, J J. International Marketing: Analysis and Strategy. New Delhi, Prentice Hall of India, 1995

❑ Paper OPMKT – 304: Sectoral Marketing Management

Module – I Non-profit Institution

1. Non-profit Institutions in Indian Market Context, e.g. Police, Public Service, Hospitals etc.
2. Analysing Socio-cultural Environment Affecting Non-profit Organizations
3. Scope and Applications of Marketing in the Context of Non-profit Organization
4. Setting Marketing Objectives
5. Analysing Beneficiary Behaviour,
6. Market Segmentation, Targeting & Positioning
7. Planning of Marketing Strategy in a Non-profit Organization, Concept of Product Service Life Cycle & Related Issues.
8. Elements of Marketing Mix
 - Product
 - Pricing Decisions
 - Distribution & Delivery Strategy

- Promotional & Public Relations Strategy
 - Role of Institutional Image
9. Monitoring & Review of Marketing Programme.

Module – II Rural Marketing

1. Rural Environment and its Dynamics
2. Marketing of Farm Products
3. Marketing of Farm Inputs
4. Marketing of Non-Farm Products and Non Farm Inputs
5. Roles and Strategies of Government, Cooperatives and Corporates in Rural Marketing
6. Globalization and Rural Marketing

References:

1. Kotler, Philip and Andreasen Alan R. Strategic Marketing for non-profit organization. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1987
2. Kotler Philip, etc. Cases and Readings for Marketing for Non-profit organizations. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1983
3. Kotler, Philip and Roberto, Eduardo L. Social Marketing. New York, The Free Press, 1989
4. Lauffer, Armand. Strategic Marketing for Non-for-profit organization. New York, Free Press, 1984
5. Lovelock, Christopher H and Charles B. Weinberg. Marketing for Public and Non Profit Managers. New York, John Wiley, 1984
6. Singh Sukhpal: Rural Marketing Management – Vikas Publishing
7. Acharya S. S. & Agarwal N. L.: Agricultural Marketing in India, Oxford & I. B. H

□ Paper OPMKT – 305: Strategic Marketing & Services Marketing

Module – I Strategic Marketing

1. Marketing Planning
 - Strategic Marketing
2. Product Planning & Life Cycle
3. Brand Management
 - 2 Concept of Brand and Brand Extension
 - 3 The Brand Equity Concept and Customer Based Brand Equity Model
 - Brand Positioning and Values
 - Choosing Brand Elements to Build Brand Equity
 - Integrating Marketing Communication to Build Brand Equity
 - Methods of measuring Brand Equity

Module – II Services Marketing

- 4 1. Characteristics of Services, Classification of Services
- 5 2. Servqual Model

- 6 3. Services Mix
- 7 4. Internal Marketing, Interactive Marketing and External Marketing
- 8 5. Managing Quality
- 9 6. Managing Services
- 10 7. Customer Relationship Management
 - Framework of Customer Relationship Marketing, Relationship through Loyalty, Loyal customer Ladder, Recovery of Lapsed Customer
 - Introduction to Customer Relationship Management, Definition of Customer Relationship Management, Concept of Customer Interaction Management, Concept of Customer Retention, Stages of Retention in Customer Life Cycle
 - e-CRM, The concept, Difference between CRM and e-CRM, Dimensions of e-CRM, Key requirement for e-CRM, e-CRM tools
 - CRM process: Benefits of CRM process, Four C's of CRM process, Organisation of CRM Process, Implementing CRM – A Step-by-step process
 - Integration of CRM with ERP systems

11

References:

1. Cristopher.H. Lovelock; Services Marketing; Prentice Hall International, N.J(1996).
2. S. M. Jha; Services Marketing, Hinalaya Publishing, N. Delhi(1996).
3. Helen Woodruff; Services Marketing; McMillan of Indial,N.Delhi(1997)
4. M. J. Xavier; Strategic Marketing; Response Books, N. Delhi-(1999).
5. Subash C. Jain; Marketing Planning and Strategy; South Western Publishing(1990)
6. J. Neol Kapferrer; Strategic Brand Management; Free Press (1996)
7. Aikar; Leadership Brand; Free Press (2000)
8. Subroto Sengupta; Brand Positioning; Tata Mc Graw Hill Publishing, N. Delhi(1990).
9. Gupta P.K., Services Marketing, Everest Publishing House (2002)
10. Ravi Shankar, Services Marketing Excel Book, (2002)
11. Valarie A. Zeidhanul & Bitner, Services Marketing, Tata McGraw Hill, N. Delhi, (2nd Edition)
12. Verma H. V. – Brand Management, Excel Book (2002)

❑ Paper OPMKT – 306: Industrial Marketing

Module – I Industrial Marketing

1. Nature & Scope of Industrial Marketing
2. Differences between Industrial & Consumer Marketing
3. Nature of Demand of Industrial Marketing
4. Classification of Industrial Products
5. Organizational Buyer Behaviour
 - Structure
 - Process

- Content
- 6. Choice Criteria
 - Factors Affecting Organizational Buyer Behaviour
 - Life Cycle Costs
- 7. Organizational Sales Responsibilities and Preparation for it
 - Objectives
 - Key Concepts
- 8. Segmentation of Industrial Market
- 9. Product Decision and Strategies
- 10. Industrial Pricing
- 11. Distribution and Channel Relationship
- 12. Industrial Marketing Communication
- 13. Performance Appraisal
 - Value Engineering
 - Procedure
 - Advantages
 - Phases

Module – II Logistics in Marketing

14. Concept of Supply Chain Management, SCM
15. SCM in the Global Environment
16. The Role of Marketing in SCM
17. Supply Chain Sales Forecasting
18. Role of Logistics in SCM
19. Information System & SCM
20. Financial Issues in SCM
21. Customer Service & SCM
22. Measuring Performance in SCM
23. Managing SCM: Managerial and Research Implications

References:

12. E. R. Corey, Prentice Hall:- Industrial Marketing – Cases & Concept
13. L. Fisher: Industrial Marketing, Business Books, London
14. F. Luthans, Mc Graw Hill: Organizational Behaviour
15. Geoffrey Lancaster, David Jobber & Macmillan: Selling & Sales Management
16. Carlos Falton, John Wiley & Sons: Value Analysis to Increase Productivity
17. Lawrence D Miles, McGraw Hill: Techniques of Value Analysis and Engineering
18. Christopher Bartlett & Sumantra Ghoshal: Managing Across Borders: The Transnational Solution, Harvard Business School Press
19. Donald J. Bowersox: The Strategic Benefits Logistics Alliances, Harvard Business Review
20. Sumantra Ghoshal: Global Strategy – An Organizing Framework, Strategic Management Framework

21. Manohar U. Kalwani & Narakesari Narayandas: Strategic Management Journal 8 (5) Long Term Manufacturer Supplier Relationship – Do they Pay off for Supplier Firms?, Journal of Marketing, 59 (January)
22. Havaladar K. Krishna, Industrial Marketing, Tata McGraw Hill Co. Ltd., N. Delhi, 2002

❑ **Paper OPMKT – 401 (Minor) : Sales & Retail Management**

Module – I Theories of Selling & Management

1. Principles of Selling
2. Theories of Selling
3. Steps in Personal selling
4. Dyadic Interaction of Selling
5. Sales Organisational Structure
6. Relationship of Sales Department with other departments
7. Size of Sales Force
8. Motivation of Sales Force
9. Compensation and Recruitment of Sales Force
10. Quotas and Territory Management
11. Sales Force Control System
12. E- Marketing
13. Franchising
 - Concepts of Franchising
 - Types of Franchising
 - Modes of Operation
 - Steps in setting up a Franchisee Organisation
14. Physical Distribution
 - Objective of Physical Distribution
 - Importance of warehousing and transportation
 - Distribution Planning Principles
 - Designing a Distribution System
15. Marketing Channels
 - Strategies of Distribution
 - Role of Channel Members
 - Types of Retailing
 - Channel Relationship

Module – II Retail Management

1. Introduction to retailing; The Retail Environment, The Retail definition, Theory of retailing, Retailing and Marketing. Types of format retailing
2. The management of service and quality in retailing
3. The retail marketing mix: The Product, Retail Pricing, Retail Promotion, Place – Supply Chain Management
4. Merchandise Management, The concept, Methods of planning and calculating inventory levels, Merchandiser skills and profile, Range Planning, Merchandise assortment and support, Negotiating the purchase.

5. Retail location strategies and decisions
6. The management of retail brands
7. The applications of IT to retail marketing, the growing role of IT in retailing IT for competitive advantage, capturing data at the point of sale, data base marketing, data mining and business intelligence, electronic retailing
8. International retailing, International retail structures, motives and reasons for international retailing, market entry methods, development of international retailing.

References:

1. Richard R.Still, Edward.W.Cundiff and A.P. Govoni, Sales Management, Prentice Hall of India, N.Delhi (2000).
2. E.L. Ansary (jt author), Distribution Management, Prentice Hall of India, N. Delhi (2000).
3. Anderson, R. Professional Sales Management Cliffs, New Jersey, Prentice Hall Inc, 1992
4. Buskirk, R. H and Stanton, W J Management of Sales Force. Homewood Illionois, Richard D. Irwin, 1983
5. Dalymple, D. J. Sales Management, Concepts & Cases, New York, John Wiley, 1989
6. Stanton, William J, etc. Management of a Sales Force Chicago, Irwin, 1995.
7. Gilbert David, Retail Management, F. T & Prentice Hall
8. Freathy Paul, The Retailing Book, F. T. & Prentice Hall
9. Evans, B. & Berman, Retail Management: The Strategic Focus, Prentice Hall India.

□ Paper OPMKT – 402 (Minor) : Market Research & Assessment

Module – I Sampling Techniques

1. Sampling Techniques
 - Simple Random Sampling; with Replacement & without Replacement
 - Stratified Random Sampling
 - Sample size determination
 - Estimation of different parameters and their standard error
 - Different cases on sample survey in the context of marketing
2. Scales & Measurement in Marketing & Analysis
 - Approaches in a survey relevant for Market Assessment
 - Different types of scaling
 - Data collection Methods
 - Variability Method: Ordered Category Sorting, Rating Method, Ranking Method, Paired Comparison (Thurstone Scale V)

- Quantitative Judgment Method: Direct Judgement Method, Fractionation, Constant Sum
- Coefficient of Concordance
- 3. Tools used for Market Assessment
- Cluster Analysis, Factor Analysis, Discriminant Analysis & Conjoint Analysis

Module II: Market Share & New Product Decision Theories

4. Market Share
 - Zero-order Method: Ehrenberg Model
 - Markov Model: Markov Process, Transition Probability Matrix, Prediction of Market Share, Brand Preferences
 - Models: Product class Sales Model, Market Share Model in a two Brand Market, Attraction Models:
 - a) Multiplicative Competitive-interaction Model (MCI)
 - b) Multinomial Logit Model (MNL)
 - Parfill – Collins Model
 - Consumer Brand Preference Model
 - Different approaches to study the consumer brand preference & associated purchase behaviour
 - Measurement of Brand preferences
5. SERVQUAL
 - Method and criticism
6. New Product Decision Theory:
 - Bayesian approach in the context of launching of new product
7. First Purchase Diffusion Model of New Product
 - Innovative Diffusion Model: Fourt & Woodlock Model
 - Imitative Diffusion Model: Mansfield Model, Fisher & Pry Model, Teece Model
 - Roger's Model for classification & first Purchase consumers
 - Bas Model: Derivation of the Model, Implication of the parameters & problems of Estimation

□ Paper OPMKT - 403: Market Forecasting Techniques

Module – I Trends & Forecast

1. Trends and Forecasts
 - Linear
 - Quadratic
 - Exponential
 - Modified Exponential
 - Gompertz
 - Log – Linear
2. Moving Average Models
 - Exponential Smoothing Methods (Single, Double)
 - Adaptive Response Rate
 - Holts Trend – Smoothing (Single)

- Seasonal Models (Horizontal Seasonal, Adaptive Trend – Seasonal, Multiplicative Trend Seasonal)

Module II: Box – Jenkins Models & other forecasting techniques

3. Box – Jenkins Models
4. Special Techniques in Forecasting
 - Lumpy Demand
 - Cumulative Sum Techniques
 - All Time Requirements
 - Fast – Dropping Forecasts

References:

1. Makridakis: Market Forecasting
2. Makridakis & Wheelwright: Interactive Forecasting
3. Pyndick & Rubenfield: Econometric Forecasting & Model Building

□ Paper OPMKT – 404: Advertising Management – (II) & Sales Promotion (II)

Module – I Advertising Management – II

1. Advertising Agency and its working – Creative, Account Servicing and Media
2. Theories of Advertising & Research
3. Message Strategy – Attention and Comprehension. Understanding Benefits Based Attitudes. Associating Felling with Brand. Group Insurance. Word of Mouth Advertising
4. Creative Strategy – Art of Copy Writing. Art and Copy. Art Direction. Elements of Design. Copy Testing and Diagnosis. Production and Implementation. Making a Creative Brief.
5. Global Advertising
6. Advertising for Small Business
7. Business to Business Advertising

Module – II Sales Promotion – II: Integrated Promotion & Public Relation

1. Integrated Promotion: Introduction, Designing an Integrated Promotion Strategy, Implementation and Control
2. Identifying & Describing Publics
3. Scope & role of Public Relations
4. Persuasion & Theory of Communication
5. Corporate Public Relations – Definition, Scope, Objectives & Strategies
6. Corporate Image & Public Relations
7. Public Relations & Marketing
8. Public Relations & Media
9. Ethics and Laws in Public Relations

10. Problem Solving Strategies in Public Relations
11. Evaluating Public Relations

References:

1. Julian Cummins: Sales Promotion, Universal Publications, New Delhi
1. Ailloni and Charas, Dan. Promotion: A Guide to Effective Promotional Planning, Strategies and Executions. New York, John Wiley, 1984
2. Blattberg, Robert C and Scott, A Neslin. Sales Promotion: Concept, Methods and Strategies. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1990
3. Schaltz, Don E and William, A Robinson. Sales Promotion Management. Chicago, Crain Books, 1982
4. Ulanoff, Stanley M Handbook of Sales Promotion, New York, McGraw Hill, 1985
5. Bahl Sushil, Making P. R. Work – Wheeler Publishing – 1997
6. New Som, Turk, Kruckeberg, This is P. R. – Wordsworth, Thomson Learning – 2000 (7th Edition)
7. Black Sam, Public Relations
8. Chaudhuri Arun, ITC Vs. BAT – Wheeler Publishing – 1998

FINANCIAL MANAGEMENT

❑ **Paper OPFM – 301 (Minor) : Accounting for Management**

Module – I Management Accounting

- Nature – objectives – role – relation with other accounting
- Changes in Financial Position.
- Financial Statement Analysis

Module – II Management Control System

- Budgetary Control & Performance Measurement (including zero base Budget, Balanced Score card, Bench Marketing, Theory of Constraint) Standard Costing
- Profit Centre and Transfer Pricing
- Divisional Performance Measurement and Control.

□ Paper OPFM –302 (Minor) : Indian Financial System

Module – I Financial Institutions of India

- An overview of Indian Financial System
- Regulatory Bodies – RBI, SEBI
- Commercial Banks
- Cooperative Banks
- Insurance Companies
- UTI & MFS
- NBFCs

Module – II Financial Market & Instruments

- Money Market as part of Financial Market
- Money
- Call Money
- Treasury Bill
- Commercial Papers
- Report
- Discount Market
- Commercial Deposits
- Market for Financial Guarantees
- Capital Market as part of Financial Markets: Primary & Secondary
- Gilt-edged Securities Market
- Industrial Securities Market & Stock Exchanges
- Bankers & Dealers
- Housing Finance
- Leasing
- Venture Capital
- Factoring
- Forfeiting
- Depositaries

References:

1. The Economics of Money, Banking & Financial Markets – Frederic S. Mishkin, Columbia University Addison – Wesley.
2. Monetary & Financial Economics – James L. Pierce, John Wiley & Sons 1984

3. Raymond Goldsmith: Financial Institutions.
4. Money, Information & Uncertainty: C.A.E. Goodhart, 1989
5. The Financial System & The Economy: Principles of Money & Banking – Bustin & Lombra, [South – Western College Publishing] Thomson Learning 2000
6. Commercial Banking – The Management of Risk – Fraser, Gup & Kolari South-Western College Publishing, Thomson Learning.

❑ **Paper OPFM – 303: Financial Economics**

Module 1 Financial Economics & Management of Financial Services

- Financial Systems: Introduction & Overviews
- Financial Intermediation
- Role / Advantages
- Financial Intermediaries & Institutions Nature, Function, Types of
 - Asset & Liabilities
- Structures of
- Management of
 - Interest Rates
 - Determination of
 - Structure of
 - Bond
 - Price
 - Yields
 - Interest Rates
 - Maturity
- Economic Trend & the Yield Curve

Module – II Financial Derivatives

- Futures
- Options
- Other Financial Derivatives

❑ **Paper OPFM – 304: Cost Management**

Module – I Advanced Costing

- Cost Concept and Management Decisions
- Full Costing, Marginal Costing and Managerial Decision Making (under certainty and uncertainty)
- Strategic Cost Management
 - Activity Based cash management target cashing, lifecycle costing, JIT approach ERP, TQM, value chain analysis.

Module – II Working Capital Management

Concepts of Working Capital Management, Importance of Working Capital, Kinds of Working Capital, Factors Determining Working Capital, Estimating Working Capital Requirements, Management of Cash Receivable Management Programming Working Capital Management, Integrating Working Capital and Capital Investment Processes, Working Capital Control and Banking Policy in India.

❑ Paper OPFM – 305: Tax Management

Module – I Income Tax Laws

Computation of income and calculation of tax under income tax law
Procedural aspects of assessment and payment of tax and penalties

Module – II Tax Planning

- Concept of Tax Planning
- Tax implications of Planning in different corporate decision areas (Capital Structure, Lease Vs. Purchase, Amalgamation etc.)

❑ Paper OPFM – 306 : Project Management & Control

Module – I Project Management & Control – I

Exploration and analysis of investment opportunities in projects, project viability appraisal
Market & Demand analysis
Technical analysis
Network analysis – CPM, PERT, crashing, resource allocation

Module – II Project Management & Control – II

Cost of Financing of projects
Projection of financial statements
Social cost benefit analysis
Project appraisal followed by financial institutions

❑ Paper OPFM – 401 (Minor) : Financial Management

Module – I Financial Decision Analysis

- Fundamental Valuation Concept.
- Capital Budgeting.
- Risk Analysis of Capital Investments.
- Capital Structure (Leverage & Cost of Capital) and Dividend Policies.

Module – II Strategic Finance

- Core Competence, Diversification
- BPO
- Global Financing and Global Disclosure
- Financial Management of Sick Units.
- Corporate Restructuring.

❑ **Paper OPFM – 402 (Minor) : Investment Management**

Module – I Investment Environment

Stock market

- New Issue Market
- Investment Companies
- Market Indexes
- Credit Rating

Module – II Security Analysis

Fundamental Analysis

- Technical Analysis
- Efficient Market Theory

❑ **Paper OPFM – 403: International Finance**

Module – I International Finance- I

- The Foreign Exchange Market
- Introduction
- Spot and Forward Markets
- Forward Premium
- A typical Foreign Exchange Transaction
- Triangular Arbitrage
 - Central Banks and Exchange Rate Regimes
- Fixed vs. Floating exchange rates regimes
- India's exchange rate regimes over the years
 - The Purchasing Power Parity principal
- The Covered Interest Parity principal
- Investing on a covered basis
- The covered interest parity condition
- Deviations from covered interest parity (Transaction cost, cost of gathering and processing information, government intervention and regulation, financial constraints and capital market imperfections, non-comparability of assets)
- Political risks and International money markets

- Testing for covered interest parity

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Module – II International Finance- II

- An introduction to unit root and cointegration
- The concepts of stationarity
- The concept of unit root
- Testing for unit roots (The Dickey & Fuller Tests)
- Granger Causality
 - Money: Role & Functions of Money – Evaluation of Classical Dichotomy
 - Interest Rates & Issues Involved
 - Critical Overview of Indian Banking System (*including Reserve Bank of India*)
 - Non-Banking Financial Intermediaries
 - International Monetary System: Its Impact on Indian Money & Capital Market
 - Money Capital
 - Theoretical issues of perfect capital market
 - Rational allocation of capital in uncertain world

□ Paper OPFM – 404: Portfolio Management

Module – I Bond Analysis and Management

Bond Valuation

YTM

- Bond Attributes
- Bond Pricing Theorems
- Convexity
- Duration
- Immunization

Module – II Portfolio Management

Risk and Return

- Markowitz: Portfolio Selection Model
- Sharpe: Single Index Model
- CAPM
- APT
- Portfolio Investment Process
- Investment Timing and Portfolio Performance Evaluation & Revision.

References:

1. I.M. Pandey – Financial Management
2. Prasanna Chandra – Financial Management
- Project Management
3. Bnearly & Myres – Principles of Corporate Finance

4. H. T. Spiro – Finance for non-financial Manager
5. Alan Shapiro – Multinational Financial Management
6. Jack Clark Francis – Investment – Analysis & Management
7. Bhalla & Tuteja – Investment Management
8. Brigham – Fundamentals of Financial Management
9. Khan – Indian Financial System
10. B. Banerjee – Financial Management
11. Jordon & Fisher – Investment
12. Alexander Baily & Sharpe: Investment
13. Horngren Charles – Principles of Financial Management Accounts
14. R. D. Kaplan – Advanced Management Accounting
15. Allan Upchurch – Advanced Cost Accounting
16. B. Banerjee – Cost Accounting
17. Asish Bhattacharya – Cost Accounting
18. Jawahar Lal – Managerial Accounting
19. V. K. Singhania – Indian Income Tax
20. V. K. Singhania – Tax Planning
21. L. M. Bhole – Financial Institutes and Markets
22. Khan & Jain – Financial Management
23. Avadhani – Marketing of Financial Services and Markets
24. C. Hull – Derivatives

HUMAN RESOURCE MANAGEMENT

OPHRM – 301 (Minor): Managing Interpersonal & Group Processes

Module I: Interpersonal Relationships

Interpersonal Communication
Interpersonal Awareness and Feedback
Interpersonal Interaction Process

Module II: Group Dynamics

1. Group Behaviour
Group Dynamics & Cohesiveness
Interactive Behaviour and Conflict
Team Building

References:

1. W.G. Bemies, Essay in Interpersonal Dynamics, Dorsey Press, USA 1979
2. D. Kolb, Organisational Behaviour, Pretice Hall, 1991
3. fred Luthans, Organisational Behaviour, McGraw Hill, 1985
4. Lauries J. Mullins, Management and Organisatinal Behaviours, Wheeler Publishing, 1992

❑ OPHRM – 302 (Minor): Human Resource Management and Policy

Module I: Man Power planning

1. Human Resource Management: Overview
2. Human Resource: Scope, Coverage and Functions
3. Man Power Planning
4. Forecasting Methods

Module II: Selection and Recruitment

1. Job Analysis, recruitment
2. Selection
3. Deployment, Redeployment
4. Job Evaluation, Job Rotation, Job Enlargement

Readings:

1. E.B. Flippo, Personnel Management, McGraw Hill
2. A.f. Sikula & J.F. McKenna, Management of Human Resources, John Wiley, 1984
3. M.S. Saiyadain, Human Resource Management, Tata McGraw Hill, f1988
4. E.A. Ramaswamy, Management of Human Resources, Oxford, 1999

❑ OPHRM – 303 : Labour Economics

Module I Wage Theory

1. Wage theory under Perfectly Competitive Markets
2. Wage theory under Imperfectly competitive Markets

3. Elasticity of Factor Substitution, Technological Progress and Income distribution
4. Home-Production and the Allocation of Time
5. The theory of Search in Labour Markets

Module II Characteristics of Labour in Less developed Countries

1. Characteristics of Labour in Less Developed Countries
2. Work Environment – hours, absenteeism, shifts, fatigue
3. Dualism
4. Harris – Todaro model
5. Formal and Informal Sector employment
6. Implicit Contact Theory

References:

1. Handerson and Quandt: Microeconomics
2. David Sapsford and Zafiris Tzannatos (ed) Current Issues in Labour Economics (Macmillan), 1990.

OPHRM – 304: Management of Industrial Relations

Module I: Industrial Relations

1. Emerging trends in Industrial Relations
2. Industrial Relations machinery – Collective Bargaining, Conciliation, tribunals, Arbitration
3. Workers' Participation in Management
4. Industrial Relations & the State

Module II: Trade Unionism

1. Trade Union:- Evolution of Trade Union movement; in India; UK; USA and 3rd World Countries
2. Industrial Disputes
3. Role of Management & Trade Union
4. Theory of Strikes

References:

1. M. Marchugton, Managing Industrial Relations, McGraw Hill, 1982
2. B.R. Patil, Collective bargaining, 1996
3. B.R. Virmani, Participative Management, Vision Books, 1988
4. C.S. Venkat Ratnam, globalization and Changes in Industrial Relations, Response Books, 2000

❑ OPHRM – 305: Cross & Global Human Resource Management

Module I: The Role of Culture

1. Human and Cultural Variables in global organisations

2. Cross Cultural Differences
3. Cross cultural Research methodology
4. Cross Cultural Leadership, Communication & Negotiation

Module II: HRM in the Modern Era

1. MNC and Human Resource Management
2. Human Resource Management in 21st Century
3. Human Resource Management and Technological Change
4. Technology transfer with a human face

☐ OPHRM – 306: Human Resource Accounting & Compensation Management

Module I: Human Resource Accounting

1. Human Resource Valuation and Accounting
2. Human Resource audit
3. Total Quality Management & Human Resource Development
1. Learning Process in Human Resource Development

Module II: Compensation Management

1. Compensation Packages
2. Fringe Benefits, Incentives, Refinement Plans.
3. Working of wage Boards, Pay Commissions etc.

☐ OPHRM – 401 (Minor): Human Resource Development

Module I: Development and Training

1. Human Resource Development
2. Designing Training Programmes
3. Training Methods and Techniques
4. Evaluation of Training Programmes

Module II: Evaluation and Appraisal

1. Performance Appraisal
2. Appraisal Instruments
3. Career Planning and Succession Planning
4. Managing Diversity

Readings:

1. K.K. Chaudhuri, Personnel management for Executives, Hemalaya Publishing House, 1998
2. Madhukar Shukla, Competing through knowledge, response Books, 1997

☐ OPHRM –402(Minor): Human Resource Counselling and Discipline

Module I: Counselling

1. Counselling Principles

2. Methods and Skills

Module II: Disciplinary Activities

1. Discipline in Industry
2. Positive and Negative Discipline

References:

1. C.S. Venkat Ratnam and B.K. Srivastav, Personnel Management and Industrial Relations, S. Chand & Sons, 1999
2. Madhurendra K. Verma, Nurturing change through your human assets, Response Books, 2000.

❑ OPHRM – 403: Legal Framework Governing Human Relations

Module I: Industrial Law

1. Industrial Relations – Overviews
2. Industrial Dispute Act
3. Factories Act
4. Laws relating to Workmen's Compensation
5. Environmental Laws

Module II: Labour Welfare Measures

1. Payment of Wages Act
2. Minimum Wages Act
3. Payment of Bonus Act
4. Equal Remuneration Act
5. Provident Fund, Gratuity, Maternity Relief

References:

1. S. L. Agarwal, Labour Relations Law in India, Macmillan, 1980
2. P.L. Malik, Industrial Law, Lucknow Eastern Book, 1999
3. O.P. Malhotra, The Law of Industrial Disputes, Tripathi, 1973
4. S.C. Srivastava, Industrial Relations and Labour Law, Vikas, 1994
5. S.D. Punekar, Deodhar & Sankaran, Labour Welfare, trade Unionism and Industrial Relations, Himalaya, 1990
6. S.C. Saxena, Labour Problems & Social Welfare

❑ OPHRM – 404 : Industrial Psychology

Module I: Industrial Psychology

2. Psychology of Trade Unionism
3. Working Conditions, ergonomics
4. Counseling

Module II: Industrial Sociology

1. Nature & Scope of Industrial Sociology
2. Industry & Society
3. Industry & Community
4. Industrial Social Stratification
5. Industrial & Family
6. Industrialism & Social Change

References:

1. Kenith Davis, Human Behaviour at work, McGraw Hill, 1981
2. P. Mersey and K. Blanchard, Management of OB, Prentice Hall, 1985
3. Andre Beteille, Social Inequality, Persuin
4. S. N. Srinivasan, culture and Society

