

M.Com (2014 Scheme) Elective (Banking and Insurance)

SEMESTER III

CO231	Paper 1	Income Tax Planning and Management
CO232B	Paper 2	Modern Banking
CO233B	Paper 3	Insurance Law and Practice
CO234B	Paper 4	Foreign Exchange Management

SEMESTER IV

CO241B	Paper 1	Indirect Taxes
CO242B	Paper 2	Investment Banking and Financial Services
CO243B	Paper 3	Actuarial Principles and Practice
CO244B	Paper 4	Management Optimization Techniques

SEMESTER III
CO231- PAPER 1
INCOME TAX PLANNING AND MANAGEMENT

Objectives

1. To expose the students to the latest provisions of Income Tax Act.
2. To identify the Tax Planning and Assessment Procedures for Individuals, Firms and Companies.

Expected Outcome

Students will get working knowledge regarding legitimate way of tax planning under different financial/ managerial decisions after taking into consideration the impact of Direct Tax Laws.

Module 1:Heads of Income- Income from Salary- Income from House Property- Income from Business or Profession- Capital Gains- Income from other Sources- Computation of Total Income. (25 hrs)

Module 2:Clubbing of Income- Aggregation of Income- Set off and Carry forward of Losses- Deduction from Gross Total Income. (10 hrs)

Module 3:Tax Planning- Tax Management- Tax Evasion- Tax Avoidance- Nature and Scope of Tax Planning and Management- Significance of Individual, Firm, and Corporate Tax Planning and Management. (8 hrs)

Module 4: Assessment of Individuals and Firms- Assessment of Individuals-Tax Incidence on Individuals- Taxable Income – How Computed- Problems on Computation of Taxable Income- Hints for Tax Planning of Individuals- Assessment of Firms-meaning of Partnership – conditions of 40 (b)- Change in Constitution of Firm- carry forward and set off of loss in the case of change in constitution- Computation of Income of Firm- Tax- Assessment of Partners of a firm- Hints for Tax Planning. (25 hrs)

Module 5:Assessment of Companies-Definitions- Taxable Income and Tax Liability-How Computed- Minimum Alternative Tax- Tax on distributed profits of domestic

companies- tax on income distributed to unit holders- Tax on income received from venture capital companies and venture capital fund- Problems on Computation of Taxable Income of Corporate Assesses. Tax Planning and Management Decisions- Tax Planning with reference to Financing and Investment Decisions – Make or Buy- Own or Lease-Repair or Replace- Employee Remuneration- Setting up of New Business- Location Aspect- Amalgamation or Demerger .(30 hrs)

Module 6: Double Taxation Relief- Meaning- Double Taxation Relief Applicable to Individuals, Firms and Corporate- Double Taxation Avoidance- GAAR (General Anti Avoidance Rules) (10 hrs)

NB: 1. Some Case Studies Involving the Learning

3. Necessary Inputs from B. Com Programme

References:

Books

1. Singhanian, V.K: Direct Tax Planning and Management, Taxman, N.Delhi
2. Singhanian V. K: Direct Taxes Laws and Practices, Taxman, N. Delhi
3. E. A Srinivas: Corporate Tax Planning: Corporate Tax Planning; Tata Mc – Graw Hill
4. Mehrotra HC : Direct Tax Planning
5. Kushal Kumar Agrawal: Direct Tax Planning and Management; Atlantic Publishers
6. Bhagavath Prasad: Direct Tax Law and Practice
7. Lakhotia RN : Corporate Tax Planning

Journals and Circulars

1. Chartered Accountant Today – Taxman for Current Reading
2. Circulars Issued by CBDT
3. Journal Chartered Accountant.

**SEMESTER III
CO232B- PAPER 2
MODERN BANKING**

Objectives

- 1. To understand the relevance of banking in the present scenario**
- 2. To impart practical knowledge about modern banking**

Module 1: Modern Banking- Concepts- New Trends in banking – Small banks and payment banks – Mudra banks --Criteria for licensing --Outsourcing of Non-core Services– Financial Inclusion –Bank Mergers and Acquisitions – new reforms in banking sector (15 hrs)

[case studies of small and payment banks and implications of past bank mergers and acquisitions)

Module 2:

Corporate Banking : Meaning and importance-various services provided-Cash Management- Debt Management, Factoring and Forfeiting-Trusteeship-Custodial services--Business advisory, Off shore services---Trade services - Corporate Deposits - Importance of Institutional deposits and retail deposits. (20hrs)

Module 3:Retail Banking- Introduction - Applicability of retailing concepts -Distinction between Retail Banking and Corporate / Wholesale Banking -Retail Products-- Overview - Customer requirements- Products development process - Approval process for retail loans-Credit scoring--Important Asset Products – innovative banking products and services. (15 hrs)

[Practical knowledge through bank visits]

Module 4:Credit Management in Banks –Loan Policy – Compliance with RBI guidelines – Credit Appraisal and Credit Decision Making – Monitoring and Review of Loan Portfolio –NPAs – Dealing with credit defaults, Stressed assets, Debt

Restructuring– SARFAESI Act, 2002--Appraisal methodology for different type of clients / products. (18 hrs)

Module 5:Risk Management in Banks - Credit Risk Management - Introduction – Basel norms(I,II and III) - Frame work for risk management - RBI guidelines on risk management - Risk rating and risk pricing - Methods for estimating capital requirements - Credit risk - standardized approach & advanced approach - Credit rating / credit scoring and rating system design - Credit Bureaus - Stress test and sensitivity analysis - Internal Capital Adequacy Assessment Process (ICAAP) (25 hrs)

Module 6:Bank Marketing Management – Marketing of Banking Services – Marketing Mix for Banking Services – Developing Marketing Strategies and plans – Marketing Budget –Organisation of Marketing Functions in Banks. (15 hrs)

References

1. Gerald Hatler, Bank Investments and Funds Management, Macmillan
2. Stigum, Managing Bank Assets and Liabilities, Dow-Jones Irwin.
3. Dudley Lockett, Money and Banking, McGraw Hill.
4. Vasant Joshi, Vinay Joshi, Managing Indian Banks- Challenges Ahead”, ResponseBooks.
5. Vasant Desai, Banks and institutional management, Himalaya Publishing House.
6. Principles of Banking, Indian Institute of Banking and Finance, Macmillan.

Journals

- 1)The Indian Banker, Published by: Indian Banks Association
- 2)Bank Quest, Published by: Indian Institute of Banking and Finance

SEMESTER III (BANKING AND INSURANCE)
CO233B- PAPER 3
INSURANCE LAW AND PRACTICE

Objectives:

1. To give a comprehensive understanding on the general principles and concepts of insurance, insurance practices and procedures
2. To create awareness among students on the legal framework of insurance

Module 1: Introduction-Insurance – Meaning, definition, nature, need and significance of insurance, history and evolution of Insurance –Mechanism of Insurance - Principles of Insurance- Insurance as a social security tool, investment avenue, risk management technique – Insurance and tax planning- Role of insurance in business and economic development – Re insurance- Double Insurance.

(15 hours)

Module 2: Legal Principles in Insurance-Insurance contract – meaning, features, factors affecting the contract, essentials of valid insurance contract, types of insurance contract, defective contracts. Fundamentals of agency laws – definition of an agent, agents regulation, Insurance and intermediaries, agents compensation, procedure of becoming an agent. Agency licenses – pre-requisites for obtaining license, license duration, cancellation, termination. - Code of conduct, unfair practices. - Functions of an agent- Agent as a practitioner- Policy valuation and claim settlement (Case Studies)

(22 hours)

Module 3: Classification of insurance policies-Meaning, features, significance, elements of protection and investment, service providers for various policies - General Insurance - Personal Insurance (Medical, Accidental, Property, Vehicle), Rural Insurance, Farm Insurance, Industrial Insurance, Commercial Insurance - Life Insurance - Whole Life Plan, Endowment, Money Back, Term plan, ULIP- Others insurance policies -Home insurance, Travel insurance, Health Insurance etc

(20 hours)

Module 4: Insurance Companies in India-Life Insurance Corporation of India – Capital structure, organization, performance and progress – Growth and development of General Insurance Corporation of India - Privatization of Insurance in India – participants, their progress and implications on Indian economy, Impact of globalisation on Insurance sector -Recent trends - FDI in insurance sector- Foreign Participants in India and their current status in Indian Insurance Industry (16 hrs)

Module 5: Development of Insurance products- Core functions of an insurance company - Product Development- Customer Servicing- Marketing and Promotion - Insurance Sales – Underwriting- Policy Administration- Claims- Reinsurance-Actuarial Support- Accounting and Investment- Training and Development.- Changing face of Indian Insurance Industry – Bancassurance, technology enabled insurance, micro insurance, social insurance,etc - Challenges faced by the insurance industry in this globalised era (15 hrs)

Module 6 : Insurance legislative framework in India- History of legislations in India- Major acts and amendments - main features of Insurance Act 1938, L.I.C. Act 1956 - General Insurance Business (Nationalisation) Act, 1972 (amended in 2002), - Insurance Regulatory and Development Authority Act 1999- Duties, Powers and functions of IRDA, Microinsurance Regulations’ Act,2005 - The Insurance Laws (Amendment) Act, 2015 - Other legislations governing insurance business in India (20 Hrs)

SUGGESTED READINGS:

1. Das, Subhash Chandra , “The Financial System in India: Markets, Instruments, Institutions, Services And Regulations”, PHI Learning Pvt. Ltd., 2015
2. Sukhvinder Singh Dari, “Impact of Privatization Policy and FDI on Life Insurance Corporation Vis-à-vis Insurance Regulatory Authority of India”, Track2Publications,2014
3. Uma Narang,”Insurance Industry in India: Features, Reforms and Outlook”, New Century Publications,2013

4. L. M.Bhole and JitendraMahakud , “Financial Institutions & Markets” 5 th Edition, Tata McGraw-Hill Education, New Delhi, 2009
 5. Neelam C. Gulati, “Principles Of Insurance Management: A Special Focus On Developments In Indian Insurance Sector Pre And Post Liberalisation”Excel Books India, 2009
 6. Karam Pal, B.S.Bodla and M.C.Garg l “Insurance Management : Principles and Practices”Deep and Deep Publications, 2007
 7. Tyagi C.L and MadhuTyagi, “Insurance- Law and Practice”, Atlantic Publishers & Distributors, New Delhi, 2007
 8. NaliniPravaTripathy, Prabir Pal, “Insurance: Theory And Practice”, PHI Learning Pvt. Ltd., 2005
 9. B. S. Bodla ,M.C.Garg and K.P.Singh, ” Insurance : Fundamentals, Environment and Procedures”Deep and Deep Publications, 2004
 10. Dr. P S Palande, R S Shah, M L Lunawat, “Insurance in India: Changing Policies and Emerging Opportunities”, SAGE Publications India, 2003
 11. Ms. M. V. Bakshi& Dr. K. C. Mishra, “Insurance Business Environment and Insurance Company Operations”
 12. Ms. M. V. Bakshi& Dr. K. C. Mishra,” Legal & Regulatory Aspects of Insurance”.
 13. [Peter Zweifel](#)(Author), [Roland Eisen](#)“Insurance Economics”
 14. <https://www.irda.gov.in> , <http://www.policyholder.gov.in/>, <http://www.newindia.co.in/>
- Journals –**
15. IRDA Journal, “The Journal” by Insurance Institute of India
 16. Journal of Insurance and Risk Management by Birla Institute of Management and Technology
 17. The *Journal of Risk and Insurance*, edited by [Keith J. Crocker](#), served online at Wiley Online Library

SEMESTER III
CO234B-PAPER 4
FOREIGN EXCHANGE MANAGEMENT

OBJECTIVES:

- *To introduce macro level operations of Foreign Exchange Management and to enable the students to understand concepts and techniques of foreign exchange.*
- *To examine different theories of Exchange Rate Behaviour, Risk, Foreign Exchange Market and their operations.*

Module 1: Introduction to Foreign Exchange Management- Foreign Exchange Management – Type of Foreign Exchange Markets and Transactions, World Trade - International Monetary System – IMF-IBRD-IFC-IDA-MIGA-ADB-,International Financial Markets - International Money and Capital Markets - Exchange Markets - Currency Markets - Euro Currency Market - Euro Bond Market – Euro Equity Market - Asian Currency Market. [18 hrs]

Module 2: Foreign Exchange Rates:-Foreign Exchange Rate - Spot and Forward Exchange Rates - Gold and the Bretton woods Systems - Fixed Exchange Rate System/Pegged Exchange Rates, Flexible Exchange Rates – Spread – Official and Free Market Rates - Cross Rates, Purchasing Power Parity Theory and Interest Rate Parity Theory.Determination of Exchange Rates -Factors which influence the Determination of Exchange Rates – Exchange Control – Objectives and Methods of Exchange Control. [21 hrs]

Module 3:Exchange Risk Management- Exchange Risk Management –Types of Risk - Trade and Exchange Risk, Exchange Rate and Currency Risk, Arbitrage and Speculation, Currency Futures and Options – Financial Swaps – Interest Rate Options - LIBOR, PIBOR, FIBOR, MIBOR, Inter Bank Deals – Nostro, Vostro, Loro. [20 hrs]

Module 4:Corporate Exposure Management-Corporate Exposure Management – Alternative Definitions of Foreign Exchange Risk Exposure Information System - Alternative Strategies for Exposure Management-Exposure Management Techniques – Organization of Exposure Management Function, Parameters and constraints on Exposure Management. [15 hrs]

Module 5: Forward Exchange Contracts- Forward Exchange Contracts- Factors that Determine Forward Margins – Calculation of Fixed Forward Rates and Option forward Rates – Forward Exchange Rates Based on Cross Rates – Execution of Forward Contract – Cancellation/Extension of Forward Contract. [17Hrs]

Module 6: India’s Foreign Exchange Scenario- Balance of Payment (BOP), Adjustments in BOP, BOP crisis of 1990, Liberalization, Economic Determination - Impact of Globalization – Liberalized Exchange Rate Management System (LERMS), Convertibility, Foreign Investment Management - Foreign Direct Investment (FDI) – National FDI policy – Foreign Portfolio Investment.

[17 Hrs]

SUGGESTED READINGS:

- *P G Apte ,“International Financial Management”, Tata Mcgraw Hill Publication.*
- *Francis Cherunilam, “International Trade and Export management”, Himalaya Publishing House Pvt. Ltd., Mumbai.*
- *C. Jeevanandam,“ Foreign exchange, Concepts, practices & control”, Sultan Chand&sons.*
- *VyuptakeshSharan, “International Financial Management”, Prentice Hall of India Pvt. Ltd., New Delhi.*
- *Bhalla, V. K., “International Financial Management”, Anmol, New Delhi.*

- *Aliber, A. Z., “Exchange Risk and Corporate International Finance”, Macmillan, London,*
- *P.K Jain, Peyrard&Yadav, “International Finance”, Macmillian.*
- *V.A. Avadhani, “International Finance, Theory and Practice”, Himalaya Publishing House.*
- *CHEUL S EUN & BRUCE GRESNICK, International Financial Management Tata McGraw Hill Co.*
- *Dr S. Kevin , International Finance , Prentice Hall*

SEMESTER IV
CO241B- PAPER 1
INDIRECT TAXES

Objectives : 1. To gain expert knowledge of the principles and laws relating to the Service Tax, Central Excise Duty, Customs duty and Central Sales Tax

Module 1: Introduction- Definition – Scope – Nature – Difference between direct and indirect tax (4 hrs)

Module 2: Service Tax in India - Procedure- Introduction – Exempted Services Vs Services included in the negative list - General exemption from payment of Service Tax - Registration- issue of invoice – bill or challan or consignment note – person liable to pay Service Tax - Payment of Service Tax – Exemptions available for small service providers - returns – Large tax payer – records and access to a registered premises. (23hrs)

Module 3: Demand, Adjudication, Offences and Other Provisions- Assessment - Recovery of service tax – Provisional attachment – Publication of Information in respect of defaulters – Penal consequences – reasonable Cause – Prosecution cause – Power to search premises – Appeals – Recovery of amount due to Central Government – Power of Central Govt. to grant exemption – Power to Grant Rebate – Power to make Rules - GATT and Tax (20 hrs)

Module 4: Central Excise Duty- Definition of Central Excise Duty- Nature of Excise Duty – Scope of Excise Duty – Levy – Kinds of excise duty – Merits and Demerits of Excise duty - important definitions—General Procedures of Central Excise -- registration – Central Excise Duty Authorities and their Powers –Penalties, Offences and

Punishments - Appeals and Revisions- Tax Liability and Valuation of Goods–Penalties, Offences and Punishments-Concession to small scale industries (20 hrs)

Module 5: Customs Duty- Definition of Customs Duty – Importance – demerits - Important definitions – basis of determining Customs Duty – Import and Export Manifest- Specified Goods - Export policy –CustomsDuty Authorities and Powers – Penalties and Prosecutions – Appeals and revisions–Tax liability and valuation of Goods - Baggage Rules –Import procedure and Documents – Export Procedure and Documents. (20 hrs)

Module 6: Central Sales Tax - Definition of Central Sales Tax- brief history – Central Tax Sales (Amendment) Act – 2001 – Important features of the Act - Objects of enacting the Central Sales Tax Act– Important definitions - Principles for determining different Categories of Sales – Sales Tax Liability – Registration of Dealers – Levy and Collection of Tax- Penalties and Prosecution – Sales Tax Authorities – Application of State Sales Tax Law –Power of Government to make Rules –Liability in special cases – Settlement of Disputes (22 hrs)

REFERENCES

1. Indirect Taxes - Dr. H.C Mehrotra and Prof.V.P. Agarwal, SahityaBhavan Publications, Agra
- 2.Indirect Taxes – V.S.Datey, Taxman Publications, New Delhi.
3. Indirect Taxes – Dr. V. Balachandrran, Sultan Chand and Sons, New Delhi

SEMESTER IV
CO242B- PAPER 2
INVESTMENT BANKING AND OTHER FINANCIAL SERVICES

Objectives:

1. To expose students to the world of investment banking.
2. To provide an introduction and general understanding to students about some of the other financial services

Module 1: Fundamentals of Investment Banking- Concept of Financial Services- Importance- Fund and Fee based services. **Investment Banking-** Concept - History and emergence of Investment Banking- Functions performed by Investment banks- Types of players in Investment banking- Difference between commercial banking, merchant banking and investment banking- Investment Banking in India. (15 hrs)

Module 2: Business of Investment Bankers- Business of raising funds through issue of equity and debt/ Fixed income instruments including international funding and rating. Business of trading. Business of mergers and acquisitions- the buy and the sell side- conflicts of interest- the trusted advisors role. Business of creating value through corporate restructuring- Wealth management business. (25 hrs)

Module 3: Ethics and Regulation - Need for ethics in the investment industry- Association of Investment Bankers of India (AIBI)- AIBI's Code of Conduct for Merchant Bankers. **Regulations-** Objectives of regulations- Potential consequences of regulatory failure- Regulatory framework for investment banking in India- SEBI (Investment Advisors) Regulations 2013. (14 hrs)

Module 4 :Venture capital, Housing Finance and Securitisation of debt-Venture capital-Theoretical framework-Indian Venture Capital Scenario. SEBI Regulations. **Housing Finance**-Concept-Role of housing and housing finance in the economy-Evolution of housing and housing finance in India. **Securitisation of debt**-Concept-Players-Operational mechanism-Securitisation in India. (25 hrs)

Module 5:Other fund based financial services-Leasing-Concept and classification-Financial evaluation of leasing from lessee's and lessor's perspective-Leasing in India-Mortgage, hypothecation, pledge, lien – Difference between pledge and lien, pledge and bailment, pledge and hypothecation, mortgage and hypothecation, mortgage and pledge. (15 hrs)

Module 6:Fee Based Financial Services-Depository Services-Concept-Depository System in India. **Stock Broking**- Concept-Stock brokers, Sub brokers & foreign brokers in India -Stock market trading in India - Derivatives trading in India. **Credit Rating**-Concept-Rating process and methodology-Credit rating in India-SEBI Regulations-Credit Rating Agencies in India. (14 hrs)

Practical: Students should at least study 4 to 5 cases in the above mentioned areas and make a presentation in class

References

1. AIBI's Due Diligence Handbook
2. AIBI's Code of Conduct for Merchant Bankers
3. Alex K Mathews & K Sasidharan, Financial Services and Systems, McGraw Hill Education.
4. Barathi V Pathak, Indian Financial System, Pearson Education India.
5. Castillo, Jerilyn J and McAniff, Peter J, Practitioners Guide to Investment banking, Circinus Business Press.
6. I.M. Pandey, Financial Management, Vikas Publishing House Ltd.
7. James C Van Horne & John Martin Wachowicz, Fundamentals of Financial Management, Financial Times prentice Hall.

8. M Y Khan, Financial Services, Tata McGraw Hill Education
9. PrathapGiri S, Investment Banking-Concept, Analysis and Cases, Tata McGraw Hill.
10. PunithavathyPandiyan, Financial Services and Markets, Vikas Publishing House Ltd.
11. RakeshRanjan, Investment Banking, Wiley Publication.
12. S Guruswamy. , Merchant Banking and Financial Services, McGraw Hill Education (India) Private Limited.
13. SEBI guidelines and latest amendments in the above segments
14. V.A. Avadhani, Marketing of Financial Services, Himalaya Publishing House.

SEMESTER IV
CO243B-PAPER 3
ACTUARIAL PRINCIPLES AND PRACTICE

Module 1: Introduction: The Actuarial Science – Theory And Application – Credibility –Characteristics of Actuarial Science–Actuarial Education –Actuarial Research – Emerging Risk – Insurance Risk – Rate Making – Pricing – Credibility – Reserving
(15 hrs)

Module2:Risk Theory: Meaning of Risk –Different Types of Risk – Risk Theory – Risk Management – Risk Control – Risk Financing – Risk Financing Option for An Insurer – Risk Retention –Computation of Risk value
(15 hrs)

Module 3:Mortality tables - Probabilities of Survival and Death - Computation of mortality rates - Preparation of mortality tables - Mortality tables for insurance and for annuities - Valuation of Life Insurance Risks and Principles underlying - Determination of Life Reserves: Meaning, Methods of calculation of Life Reserve: Terminal, initial and mean reserves - Actuarial Analysis of pension plans.
(25 hrs)

Module 4:Reinsurance: Basis of reinsurance – forms of reinsurance – the cost of reinsurance to the cedant – the reinsurer’s margin – reinsurance pricing method – formula – process of reinsurance pricing – facultative certificates – property certificates – casualty certificates – the role of actuary
(25 hrs)

Module 5:Valuation of Insurance companies- Valuing an insurance company – operating an insurance company – regulating an insurance company.
(15 hrs)

Module 6:Cases on insurance company valuation.
(13 hrs)

References:

1. Hossack, LB: J.H. Pollard and B. Zehnwirth, Introductory Statistics with Applications in General Insurance, Cambridge University Press; Cambridge, England.
2. Babbel, David F. and GraigB.Merrill, Valuation of Interest, Sensitive Financial Instruments, Society of Actuaries, Maringale.
3. Whatsham: Futures & Options in Risk Management, Thomson
4. Morgan, J.P.: Introduction to Credit Metrics, J.P. Morgan, New York.
5. Bell, David E. and AuthurShleifer Jr.: Risk Management.
6. Course material and books published by "Insurance Institute of India", Mumbai.

SEMESTER IV
CO244B-PAPER 4
MANAGEMENT OPTIMIZATION TECHNIQUES

Objectives:

1. To impart knowledge on various facets of project management viz. project preparation, feasibility study as well as project scheduling and monitoring.
2. To convey basic principles of project optimization using various Operational Research tools.

Module 1 Optimization Techniques - Introduction to Management Science/ Operations Research- Definition –Nature and Importance- Steps in intelligent decision making- Modeling Techniques (10 hrs)

Module 2: Linear Programming – Formulation of LPP – Maximize, Minimize objective function-constraints and non-negativity conditions- Graphical solution –optimal solution- Infeasible and unbounded solutions- degeneracy- Simplex Method – Slack, surplus and artificial variables- Duality – Primal and Dual Problem (15 hrs)

Module 3: Optimization Techniques (contd.)Transportation Problems-Balanced and Unbalanced- initial basic feasible solution using North West corner rule, Lowest Cost Entry and Vogel Approximation method- optimal solution- Modi Method- Assignment Problem – Hungarian Method for solving assignment problem- Travelling Salesmen problem – Unbalanced Assignment problem (20 hrs)

Module 4: Other Optimization Techniques Game Theory- Pure and Mixed Strategy- Pay off matrix- Maximin and Minimax – Saddle point- Solution of pure strategy games- Arithmetic method of solving mixed strategy games- Replacement theory- replacement of capital items and items that fail completely- Individual and group replacement policy. (10 hrs)

Module 5:Project Scheduling and Monitoring Network Analysis - Network
analysis: scheduling and control of projects via identification of the critical path- free
independent and total float (slack), PERT – time estimates and probability of completion
- cost/time tradeoff analysis- crashing of projects and resource considerations
(25 hrs)

Module 6: Queuing Theory- Models (Simple problem),-Inventory models-
computation (15 hrs)

References:

1. JK Sharma- operation Research- Theory and Practice- Mac Millan
2. Bhavesh M Patel, “Project management” Vikas Publishing House
3. John M. Nicholas, Project management for business and Technology- Problems
and practice.
4. Clifford F Hry, Erik W. Larson and Goutam V Desai- “ Project Management-
the Managerial process”, Tata McGraw Hill Education Pvt. Ltd. , New Delhi.
5. Harvey M Wagner- “Principles of Operation Research, PH Learning Pvt. Ltd.
6. Hamdy A Thaha, Operations Research – An Introduction, Pearson Prentice
Hall