MMS SEMESTER IV (Core And Elective Papers)

Sub. Code	Subject	Teaching Hours		Assessment Patterns				No. of Credits
		No. Of Sessions of 90 Minutes	No. Of sessions per week	Continuous Assessment	Semester End Examination	Total Marks	Duration of Theory Paper	
4.1	**Customer Relationship Management and Supply Chain Management (CRM & SCM)**	30	2	40IA	60UA	100	3	2.5
4.2	**Creativity and Innovation Management**	30	2	40IA	60IA	100	3	2.5
4.3	**Software Management**	30	2	40IA	60UA	100	3	2.5
4.4	**Entrepreneurship Management and Digital Entrepreneurship**	30	2	40IA	60IA	100	3	2.5
4.5	**Elective-I**	30	2	40IA	60IA	100	3	2.5
4.6	**Elective II**	30	2	40IA	60IA	100	3	2.5
	Industry Oriented Dissertation		**100**					2.5
			Total No of Credits					17.5

UA-University Assessment IA-Internal Assessment

Elective Papers For Semester IV

Subject Code	Groups				
	Digital Business Group I	**Marketing & Digital Marketing Group II**	**Human Resource & Digital Human Resource Group III**	**Finance & Digital Finance Group IV**	**Information Technology Group V**
4.5	Digital Technology Management	Lead Generation for business & Mobile Web Marketing	Competency Mapping & Performance Management	Corporate Valuation	Software Project Management
4.6	Digital Asset Management	Content Marketing and Affiliate Marketing	Compensation and Rewards Management.	Security Analysis & Portfolio Management	IT Infrastructure Management

Semester	Total No. of Credits
Semester I	20
Semester II	20
Semester III	22.5
Semester IV	17.5
TOTAL	80

4.1 Customer Relationship Management and Supply Chain Management-100 Marks-University Assessment-15 Sessions of 3 hours-Semester IV

SL.No.	Particulars	Sessions
1.	**Overview of SCM**- Meaning, Definition, Stages of SCM development Definition of E-SCM, Characteristics of e-SCM, E-SCM- Relation to ERP, e-Procurement, e-logistics, Internet Auctions, e-Markets, Electronic business process optimization, business objects in SCM Developing e-SCM strategies the Game Plan for E-SCM Success Changing view of Enterprise Strategy and Barriers to e-SCM, Preliminary Stages in e-SCM Strategy Development, Developing the e-SCM Strategy	**3 Sessions of 3 Hours**
2.	**Customer Centric Supply Chain-** Definition of CRM, CRM is strategic tool, Emerging concepts in CRM, Conceptual Framework of CRM, Mapping the Cluster of CRM Components, Today's Customer Dynamics, Creating Customer Centric Organization	**2 Sessions of 3 Hours**
3.	**Technology tools for CRM**- Data mining for CRM-some relevant issues, Changing patterns of e-CRM solutions in the future, how to structure a customer focused IT organizations to support CRM, Framework for Developing Customer relationship in organization, E-CRM, deriving value of customer relationship, review and comparative assessment of CRM solutions for key verticals, the evolution of relationship in e- CRM marketing.	**2 Sessions of 3 Hours**
4.	**Implementing CRM**- Partner Relationship Management, Electronic Bill Presentment and Payment, CRM Analytics- Optical allocation rules for CRM, Measuring the effectiveness of relationship marketing, the past, present and future of CRM, implementing a technology based CRM solution, Decision metrics for CRM solutions , Characteristics of a good customer satisfaction survey CRM and its measurement-Customer Equity and Customer Life Time Value ("CLV")	**2 Sessions of 3 Hours**
5.	**Current Trends, Issues and Challenges in CRM**- To bid or to buy? Online shoppers preferences for online purchasing channels Overcoming visibility issue in a small to medium retailer and using automatic identification and data capture technology The Hispanic view of e-mail, popup and banner advertising The trade value perspective of EC: an integration of transaction value and transaction cost theory, Effect of e-CRM value perception on website loyalty	**2 Session of 3 Hours**
6.	**Supplier Relationship Management**-Integrating suppliers into the e-value chain-Definition and Components of SRM, Internet Driven SRM Environment Anatomy of E-SRM Market Place Exchange Environment, Implementing e-SRM	**1 Session of 3 Hours**
7.	**Logistic Resource Management(LRM)**-Definition, Defining e-LRM, Understanding the Third Party Logistics Network, Choosing and Implementing an LSP Solutions	**1 Session of 3 Hours**
8.	**Architecting the e-SCM environment**- Organizational and Technology Architecture, The future of e-sCM	**1 Session of 3 Hours**
9.	Case studies and Presentations	**1 Session of 3 Hours**

Reference Text

1. **E-CRM analytics –igi-global.com**
2. Customer Relationship Management, Jagdish Sheth & G shainesh
3. CRM : Emerging Concepts, Tools and Applications : Jagdish Seth & Parvatiyar
4. CRM Essentials, J W Gosney
5. N. Viswanathan, Analysis of Manufacturing Enterprise, Kluwer Academic Publishers,2000
6. R.B. Handfield and E.L.Nochols Jr, Introduction to Sypply Chain Management, Prentice Hall, 1999
7. Sunil Chopra and Peter Meindel, Supply Chain Management Strategy, Planning and Operation, Prentice Hall 2002
8. Introduction to e-Supply Chain Management- A CRC Press Company

4.2 Creativity & Innovation Management 100 Marks -15 Sessions of 3 Hours Each
Semester IV

SL.No.	Particulars	Sessions
1.	Introduction Creativity and Innovation- Nature of Creativity: Person, Process, Product and Environment Nature of Innovation: Making the Idea a Reality	**2 Sessions of 3 Hours**
2.	Need for Creativity and Innovation in Organizations3Role of Creativity and Innovation in the Organisation Dynamics that underlie Creative Thinking	**3 Sessions of 3 Hours**
3.	Creative insight: Why do good ideas come to us and when they do? Idea evaluation: What to do with generated ideas? Creativity in Teams	**2 Sessions of 3 Hours**
4.	Developing and Contributing to a Creative-Innovation Team Managing for Creativity and Innovation Tools and Techniques in Creativity	**2 Sessions of 3 Hours**
5.	Evolving a Culture of Creativity and Innovation in Organizations Creativity in the Workplace Creativity and Change Leadership	**2 Session of 3 Hours**
6.	Researching/Assessing Creativity Global Perspectives on Creativity	**2 Sessions of 3 Hours**
7.	Case Studies and Presentations	**2 Sessions of 3 Hours**

Reference Text

1. Innovation Management – Allan Afuah – Oxford Publications
2. Managing & Shaping Innovation – Steve Conway & Fred Steward – Oxford Publications

4.3 Software Management 100 Marks -15 Sessions of 3 Hours- Semester IV

SL.No.	Particulars	Sessions
1.	The Software Engineering Discipline – Evolution And Impact; Programs Vs. Software Products; Why Should Software Engineering; Emergence Of Software Engineering: Early Computer Programming, High-level Language Programming, Control Flow-based Design, Data Software Life Cycle Models; Classical Waterfall Model; Iterative Watermill Model; Prototyping Model; Evolutionary Model; Spiral Model	3 Sessions of 3 Hours each
2.	Software Project Management; Responsibilities Of A Software Project Manager; Project Planning; Materials For Project Size Estimation:	2 Sessions of 3 Hours each
3.	Classical Analysis & Design Of Software : Requirements Gathering And Analysis; Software Requirements Specification (Srs): Contents Of The Srs Document, Functional Requirements, Traceability , Characteristics Of A Good Srs Document;	3 Sessions of 3 Hours each
4.	Software Design; Cohesion And Coupling, Classification Of Cohesiveness, Classification Of Coupling; Software Design Approaches: Function-oriented Design, Object-oriented Design; Function-oriented Software Design; Overview Of Sa/Sd Methodology; Structured Analysis; Data Flow Diagrams (Dfds): Primitive Symbols Used For Constructing Dfds, Some Important Concepts Associated With Designing Dfds; Structured Design: Flow Chart Vs. Structure Chart, Transformation Of A Dfd Model Into A Structure Chart;	2 Sessions of 3 Hours each
5.	Software Quality: Coding: Coding Standards And Guidelines; Code Review: Code Walk- throughs, Code Inspection; Testing: Verification Vs. Validation, Design Of Test Cases; Unit Testing; Black-box Testing; White-box Testing; Debugging; Integration Testing; System Testing: Performance Testing; Software Reliability And Quality Management: Software Reliability: Reliability Metrics, Statistical Testing; Software Quality; Software Quality Management System: Evolution Of Quality System;	3 Sessions of 3 Hours each
6.	Case Study	2 Sessions of 3 Hours each

Reference Text

1. Fundamentals of Software Engineering, Mall, Rajib, PHI. 2. Software Engineering - A Practitioner's Approach ,
2. Roger Pressman,
3. Software Engineering, Sommerville, Pearson.
4. An Integrated approach to Software Engineering, Jalote, Pankaj

4.4 Entrepreneurship Management and Digital Entrepreneurship-100 Marks -15 Sessions of 3 Hours- Semester IV

SL.No.	Particulars	Sessions
1.	Introduction- Concept of Entrepreneur, Entrepreneurship and Enterprise, Intrapreneur, Attributes and Characteristics of a Successful Entrepreneur, Role of entrepreneur in Indian Economy and Developing economies, Entrepreneurial Culture	**2 Sessions of 3 Hours**
2.	Digital Business in Perspective- The digital opportunity**,** Business risk and challenges, The need for business agility	**1 Session of 3 Hours**
3.	Developing a Business Plan-the Importance of Business Planning, Components of Business Plan Business Planning Process, Environmental Analysis-Search and Scanning, Defining Business Idea, Government Procedures to be complied with	**2 Sessions of 3 Hours**
4.	Project Management- Technical, Financial, Marketing, Personnel and Management Feasibility, Estimating Fund Requirement and Fun Raising, Venture Capital Funding	**3 Sessions of 3 Hours**
5.	Business Models and Strategies- Business Models for e-business, Selection of Appropriated Business model, Digital Strategy and Planning and Building Digital Business	**3 Sessions of 3 Hours**
6.	Government Initiatives- Role of Central and State Government in Entrepreneurship Promotion Different Agencies- District Industrial Centres(DIC) , Small Industries Service Institute (SISI) , Entrepreneurship Development Institute of India (EDII), National Entrepreneurship and Small Business Development (NIESBUD), National Entrepreneurship Development (NEDB),	**2 Sessions of 3 Hours**
7.	Case Studies and Presentations	**2 Sessions of 3 Hours**

Reference Text:

1. Entrepreneurship: New Venture Creation- David H, Holt
2. Entrepreneurship-Hisrich Peters
3. The Culture of Entrepreneurship-Brigtte Berger
4. Project Management- K. Nagarajan
5. Entrepreneurship Development-Dr. P.C. Shejwalkar
6. Entrepreneurship Development-Shri. Vasant Desai

GROUP I
DIGITAL BUSINESS MANAGEMENT
ELECTIVE PAPER
4.5 Digital Technology Management-100 Marks-15 Sessions of 3 Hours-Semester IV

SL.No.	Particulars	Sessions
1.	**Digital Technology- Introduction**, Technology Discontinuity, Disruptive Technology, Value Creation, Strategic Implementation, Meaning and Definition of Digital Technology, Embedded Systems, Network Standards, Embedded Software (Give Examples of Embedded Software use in different industry)	**1 Session of 3 Hours**
2.	**Strategic Implications of Digital Technology**- Implications on Industry Structure, Implications on Critical Success Factors and Implications of Generic Strategies	**1 Sessions of 3 Hours**
3.	**Technology Absorption and Diffusion** – Key Challenges in absorption, adaptation and improvement of Digital Technology- New competitive world, Market driven challenges, The Organizational Challenge of Managing complex networks Diffusion of Technology: Rate of Diffusion- Innovation Time and Innovation Cost-Speed of Diffusion-Technology indicators	**3 Sessions of 3 Hours**
4.	**Organization of Digital Technology**- Major goals of the industry, Digital Technology policies, incentives and Support mechanisms **Digital Technology and Process Innovation**- Digital Technologies and Organizational routines and business processes, Internet based Collaborative Systems, Rethinking of Supply Base Relationship and Consumer centricity **Digital Technologies and Product/Service Innovation**- Organizing for digitally enabled products/services, Digitization of physical products and changes in strategy, Digital Product architecture, Digitization, product modularity and related modes of organizing, Digital controls and organizing **Emerging Infrastructures**-Digital innovation platforms, Organizing for the development of digital infrastructure, Digital tools enabling creativity, design, engineering and other innovative activities e.g. CAD, CASE tools and Software development, CAS tools, Infrastructures for organizational and interorganizational innovation such as Product Lifecycle Management systems in manufacturing, Building information modelling , organizational elements of integrating disparate digital technologies, or of digital with non digital systems	**5 Sessions of 3 Hours**
5.	**Functional Aspects**-Capturing Value from Digital Technology, System Safety, Cost of Digital Technology and Software Reuse, System Reliability, Software System Testing, The Role of Standards, The Human aspects in Digital Technology Management-Integration of People and Technology	**3 Sessions of 3 Hours**
6.	**Case Studies and Presentations**	**2 Sessions of 3 Hours**

4.6 Digital Asset Management-100 Marks-15 Sessions of 3 Hours-Semester IV

SL.No.	Particulars	Sessions
1.	CREATING DIGITAL CONTENT Digital Primer, Any Content – Anywhere, Anytime, Digital Content Consumer, Tools and the Trade, Digital Recording, CGI and Digital Content Creation, Digital Audio, Rich Media, Streaming Media, Digital Interactive Television, Digital Cinema.	**3 Sessions of 3 Hours**
2.	COMPRESSING AND INDEXING Document Databases, Compression, Indexes, Text Compression, Indexing Techniques, Image Compression, Mixed Text and Images	**3 Sessions of 3 Hours**
3.	CONTENT MANAGEMENT Systems for Managing Content, The Enterprise Content Management System (CMS), Major parts of a CMS, Need for a CMS, Roots of Content Management, Branches of Content Management	**3 Sessions of 3 Hours**
4.	DESIGN OF CMS The Wheel of CMS, Working with Metadata, Cataloging Audiences, Designing Publications, Designing content Components, Accounting for Authors, Accounting for Acquisition sources,	**2 Sessions of 3 Hours**
5.	BUILDING CMS Content Markup Languages, XML and Content Management, Processing Content	**2 Sessions of 3 Hours**
6.	Case Studies and Presentations	**2 Sessions of 3 Hours**

Reference Text

1. John Rice and Brian Mckerman (Editors), Peter Bergman, "Creating Digital Content", McGraw-Hill, USA, 2001[UNIT 1]
2. Ian H Witten, Alistair Moffat, Timothy C Bell, "Managing Gigabytes", Academic Press, USA, 1999 [UNIT 2]
3. Bob Boiko, "Content Management Bible", John Wiley & Sons, USA, 2001 [UNITS 3,4,5]
4. Abdreas Ulrich Mauthe and Peter Thomas, "Professional Content Management Systems – Handling Digital Media Assets", John Wiley & Sons, USA, 2004
5. Dave Addey, James Ellis, Phil Suh, David Thiemecke, "Content Management Systems (Tool of the Trade)", Apress, USA, 2003.

GROUP II
MARKETING AND DIGITAL MARKETING
ELECTIVE PAPER

4.5a Lead Generation for Business 50 Marks-08 Sessions of 3 Hours-Semester IV

SL.No	Particulars	Sessions
1.	Understanding Lead Generation For Business Why Lead Generation is important Understanding Landing Pages Understanding Thank You Page Landing Page vs. Website Best practices to create a landing page Best practices to create a thank you page Reviewing landing pages What is A/B Testing How to do A/B Testing Selecting landing pages after A/B Testing Converting leads into sales Creating lead nurturing strategy Understanding lead funnel Steps in lead nurturing	6 sessions of 3 hours
2.	Case studies and presentations	2 sessions of 3 hours

4.5b Mobile Web Marketing 50 marks (7 Sessions of 3 Hours Each) Semester -IV

SL.No	Particulars	Sessions
1.	Understanding Mobile Devices Mobile Marketing and Social Media Mobile Marketing Measurement and Analytics Fundamentals of Mobile Marketing Key Industry Terminology Creating Mobile website through wordpresses Using tools to create mobile websites Using tools to create mobile apps **Advertising on mobile (App & Web)** Targeting ads on Apps Targeting ads via location Targeting ads on search engine Targeting ads on telcos data Content Marketing on Mobile Mobile strategy segmentations option, targeting and differentiation Mobile Marketing Mix SMS Marketing Creating mobile application Uploading mobile app in android and iox	5 Sessions of 3 hours
2.	Case studies and presentations	2 Session of 3 hours each

4.6 Content Marketing and Affiliate Marketing 100 marks- 15 Sessions of 3 Hours Each- Semester- IV

SL.No	Particulars	Sessions
1.	Introduction to content marketing Objective of Content Marketing How to write Compelling Content Understanding Keyword Research for Content Content Marketing Process Unique ways to write Magnetic headlines Some content marketing secrets – learning from experts Using Template to create content Overcoming Content Marketing Roadblocks Optimising Content for Search Engines Promoting Content to increase traffic, engagement & sales How to magnetise your content Examples of top content marketing	6 sessions of 3 hours
2.	What is affiliate marketing? 3A's of Affiliate marketing How people make millions of dollars in Affiliate marketing Affiliate Marketing History Changes in Affiliate marketing industry over the years Affiliate marketing scenario in India How to be a super affiliate and make tons of money Different ways to do affiliate marketing Affiliate Marketing Secrets How your trainer makes money in affiliate marketing How people make money in affiliate marketing Top affiliate networks in the world	6 sessions of 3 hours
3.	Case studies and presentations	3 sessions of 3 hours each

GROUP III
HUMAN RESOURCE AND DIGITAL HUMAN RESOURCE
ELECTIVE PAPER
4.5 Competency Mapping and Performance Mangement-100 marks- 15 Sessions of 3 Hours Each- Semester- IV

SL.No	Particulars	Sessions
1.	**Competency at work** □ The competency model for the New HR Professional □ Strategic Contribution □ Personal Credibility □ HR Delivery □ Business Knowledge □ HR Technology □ Concepts of competency, competency at work □ Types of competencies – behavioural and technical □ Competency description □ Competency levels □ Designing competencies dictionary □ Measuring of mapping competencies □ BEI □ Assessment centre □ Conducting and operating assessment centre □Role of assessors in an assessment centre □ Designing tools in an assessment centre □ Feedback mechanism	4 Sessions of 3 Hours each
2.	Competency Method in Human Resource Management: Features of Competency Methods - Definitions - Approaches to Mapping Competency Mapping Procedures and Steps: Business Strategies -Performance Criteria -Criteria Sampling- Tools for Data Collection - Data Analysis -Validating the Competency Models -Short Cut Method -Mapping Future Jobs Single Incumbent Jobs =Using Competency Profiles in HR Decisions Methods of Data Collection for Mapping: Observation-. Repertory Grid- Critical Incidence Technique- Expert Panels- Surveys - Automated Expert System- Job Task Analysis- Behavioral Event Interview Developing Competency Models from Raw Data:- Data Recording- Analyzing The Data - Content Analysis of Verbal Expression- Validating the Competency Models	4 Sessions of 3 Hours each
3.	Performance Management(PM)-Definition, The PM Contribution, aims and Role of PM systems, Characteristics of an Ideal PM System, PM Process, PM and Strategic Planning	1 Session of 3 Hours

4.	Performance Appraisal System Implementation-Defining Performance, Determinants of Performance, Dimensions of performance, Approaches to Measuring Performance, Diagnosing The causes of poor performance, Differentiating Task from Contextual Performance, Choosing a Performance Measurement Approach, Measuring Results and behaviours, Gathering Performance Information, Implementing PMS	2 Sessions of 3 Hours
5.	Conducting Staff Appraisals-Introduction, need, Skills required, The role of the Appraiser, Appraisal methods, Raters errors, Data Collection, Conducting an Appraisal interview, Follow Up and Validation	1 Session of 3 Hours
6.	Performance Consulting-Concept, Need, Role of the Performance Consulting, Designing and using Performance Relationship Maps, Contracting for Performance Consulting Services, Organizing Performance Improvement Department	1 Session of 3 Hours
7.	Case Studies and Presentations	2 Sessions of 3 Hours

Reference Text

1. The Handbook of Competency Mapping: Understanding, Designing and Implementing Competency Models in Organizations by Seema Sanghi Sage Publications Pvt. Ltd;
2. Competency Mapping by R K Sahu, Publisher : Excel ASTD Competency Study: Mapping the FuturebyPaul R. Bernthal**,** Publisher: ASTD Press (June 6, 2004**)**
3. Performance Management by Julie Freeman.
4. Bringing out the best in people by Daniels.
5. Effective Performance Appraisal by James Neil.

4.6 Compensation and Rewards Management- 100 marks- 15 Sessions of 3 Hours Each- Semester- IV

SN.	Particulars	Sessions
1.	**Introduction**-Reward Strategies, Elements of reward strategies, Compensation /Remuneration in place reward strategies Different elements of compensation structure, Types of grades and pay Structures Developing grade and pay structures, Individual pay, team paying for organizational performance CTC of each element of compensation structure, understanding inflation and Provident Fund, Types of Variable Pays, Arriving at CTC of an employee/Candidate, Remuneration Survey, Equity Compensation Plans	**6 Sessions of 3 Hours**
2.	**Reward Management:** Definition, Aims of reward management, reward system, elements of reward system, factors affecting reward system, policy and practice, impact of environment, internal & external Reward management for special groups- Rewarding directors and senior executives, international reward, rewarding sales and customer service staff, rewarding knowledge workers, shop floor pay Union role in Reward Management- Impact of Trade Union on reward determination, unions and alternative reward system, Govt. and legal issues in reward system, reward system in India, National wage policy	6 Sessions **of 3 Hours**
3	E-Compensation Systems-Employee Information, Attendance Record, Leave Record, Emoluments and PF details, Generate Pay Slips, TDS forms, Form 16, Employee Training Identifier and Training programmes Need for E-Compensation System, Overview of different vendors providing E-compensation systems	**2 Sessions of 3 Hours**
4	Case Studies and Presentations	**1 Session of 3 Hours**

GROUP IV
FINANCE AND DIGITAL FINANCE
ELECTIVE PAPER
4.5 Corporate Valuation-100 marks- 15 Sessions of 3 Hours Each- Semester- IV

SL.No	Particulars	Sessions
1.	Approaches to Valuation	**1 Session of 3 Hours**
2.	Valuation Tools: An overview The Time Value of Money, Risk Measurement, Accounting data, Statistics, Looking for Relationships in the Data Purposes For Valuation And Various Special Situations	**1 Session of 3 Hours**
3.	Discounted Cash Flow Valuation - a) Basics b) Estimating Inputs Discount Rates--Growth flows --Growth -- Growth Patterns c) Choosing the Right Model d) Loose Ends-- Dealing with Cash and Cross Holdings -- Dealing with Management Options/ Warrants/ Convertibles e) Examples of Valuation	**2 Sessions of 3 Hours**
4.	Relative Valuation a. Basics and Tests b. Multiples PE Ratio PEG Ratios Relative PE Ratios EV/EBIT Multiples Book Value Ratios Sales Multiples Choosing the right multiple	**3 Sessions of 3 Hours**
5.	Brand Name Valuation	**1 Session of 3 Hours**
6.	Valuing Private Companies	**1 Session of 3 Hours**
7.	Option Pricing Applications in Valuation	**1 Session of 3 Hours**
8.	Valuation in Acquisitions	**2 Sessions of 3 Hours**
9.	Value Enhancement : DCF, EVA, and CFROI	**1 Session of 3 Hours**
10.	Case Studies and Presentations	**2 Sessions of 3 Hours**

Reference Text:

1. Koeller, Goedhart, and Wessels, Valuation: Measuring and Managing the Value of Companies, John Wiley & Sons, 4th Edition, 2005.
2. Palepu, Healy, and Bernard, Business Analysis and Valuation Using Financial Statements, Southwestern Publishing, 3rd Edition, 2000.
3. Pereiro, Valuation of Companies in Emerging Markets: A Practical Approach, John Wiley & Sons, 1st Edition, 2002.
4. Ross, Westerfield, Jaffe, Corporate Finance
5. Brearly Myers , Corporate Finance
6. Aswath Damodaran, Valuations
7. Corporate Valuation - Prasanna Chandra

4.6 Security Analysis and Portfolio Management-100 marks- 15 Sessions of 3 Hours Each- Semester- IV

SL.No	Particulars	Sessions
1.	RISK AND RETURN • Risk and return in each asset class - equity, fixed income, MF etc. • Simple determination of stock market price using time value of money - simple one period and multi period case. • Return on common stock under uncertainty, for a single stock Expected Return, Variance of Return, and Concept of probability Distribution of Returns. • Co-movement of two Assets returns, Measuring of Covariance definition and Simple Numerical Example, Correlation Coefficient • Two asset portfolio case, expected return and variance of returns of a Two asset Portfolio Simple Numerical Example and Graphical Illustration • Diversification of Risk, Systematic and Unsystematic risk	**2 Sessions of 3 Hours**
2.	MODERN PORTFOLIO THEORY • General N-asset Portfolio Problem, Marches Model: Objectives Function and Constraints, • Meaning of Efficient Frontier / Set, Concept of CML (Capital Market Line), Concept of • Market Portfolio, Risk Free rate, Borrowing and Lending rates	**2 Sessions of 3 Hours**
3.	SHARP'S SINGLE INDEX OR MARKET MODEL: • How Asset Returns move with the market. • Slope of security Market Line (SML) • Properties of any asset on the line. • Assumptions and some empirical evidence of CAPM • · Arbitrage pricing theory - Introduction	**2 Sessions of 3 Hours**
4.	CAPITAL ASSET PRICING MODEL: • Statement of CAPM. • Slope of security Market Line (SML) • Properties of any asset on the line. • Assumptions and some empirical evidence of CAPM • · Arbitrage pricing theory – Introduction	**2 Sessions of 3 Hours**
5.	EFFICIENT MARKET HYPOTHESIS (EMH) : • Random walk theory • Weak, Semi-Strong and Strong form • Empirical Evidence of EMH • Anomalies in the markets: Firm Size Effect, January Effect, Monday Effect.	**2 Sessions of 3 Hours**
6.	HEDGING, SPECULATION AND MANAGING RISK - RETURN BALANCE • Effect of taxation on investment decision, permissible deductions, exemptions, tax free investments, tax lots and loss harvesting • Asset allocation basics - as per IPS, tolerance definitions, substitution rules • Weighted average cost of capital, portfolio beta and risk premium	**2 Sessions of 3 Hours**

	• Using fundamental analysis for security selection and technical analysis for timing of orders • Investor behaviour analysis - cyclic nature, need induced decisions, tax dependencies, risk and return expectations, modeling using intelligence derived from behavioural analysis	
7.	PORTFOLIO PERFORMANCE MEASURES • Sharp Index • Treynor Index • Jensen's Measure • · Empirical Test of Mutual Fund Performance & EMH	**1 Session of 3 Hours**
8.	Case Studies and Presentations	**2 Sessions of 3 Hours**

Reference Text:

1. Security Analysis and Portfolio Management (6th Edn.) By Donald Fischer and Ronald Jordan, Prentice Hall of India (1995)
2. Securities Analysis and Portfolio Management , Prasanna Chandra, Tata McGraw Hill (2002)

GROUP V
INFORMATION TECHNOLOGY
ELECTIVE PAPER

4.5 Software Project Management-100 marks- 15 Sessions of 3 Hours Each- Semester- IV

SL.No	Particulars	Sessions
1.	An overview of IT Project Management - Introduction, the state of IT project management, context of project management, need of project management, project goals, project life cycle and IT development, extreme project management, PMBOK. IT Project Methodology ITPM), project feasibility, request for proposal (RFP), the business case, project selection and approval, project contracting, IT governance and the project office.	2 Sessions of 3 Hours
2.	The Human Side of Project Management- Introduction, organization and project planning, the project team, the Project environment.	1 Session of 3 Hours
3.	Introduction, project management process, project integration Management, the project charter, project planning framework, the contents of a project plan, the planning process. The Work Breakdown Structure (WBS), the linear responsibility chart, Multidisciplinary teams.	2 Sessions of 3 Hours
4.	The Scope Management Plan- Introduction, scope planning, project scope definition, project scope Verification, scope change control.	1 Session of 3 Hours
5.	The Project Schedule, Budget and Risk Management- Introduction, developing the project schedule, project management software tools, methods of budgeting, developing the project budget, improving cost estimates, finalizing the project schedule and budget. IT project risk management planning process, identifying IT project risks, risk analysis and assessment, risk strategies, risk monitoring, and control, risk responses and evaluation.	2 Sessions of 3 Hours
6.	Allocating Resources to the Project- Resource loading, resource levelling, allocating scarce resources to projects and several projects, Goldrattís critical chain.	1 Session of 3 Hours
7.	The Project Communication Plan-Introduction, monitoring and controlling the project, the project communications plan, project metric, project control, designing the control system, the plan monitor control cycle, data collection and reporting, reporting performance and progress, information distribution.	1 Session of 3 Hours
8.	Managing Change, Resistance and Conflicts	1 Session of 3 Hours
9.	Managing Project Procurement and Outsourcing 10.1 Introduction, project procurement management, outsourcing.	1 Session of 3 Hours

10.	Project Leadership and Ethics- Introduction, project leadership, ethics in projects, multicultural projects.	1 Session of 3 Hours
11.	The Implementation Plan and Project Closure- Introduction, project implementation, administrative closure, project evaluation, project audit.	1 Session of 3 Hours
12.	Case Studies and Presentations	1 Session of 3 Hours

Reference Text

1. Information Technology Project Management", Jack T. Marchewka, 3rd edition, Wiley India, 2009.
2. S. J. Mantel, J. R. Meredith and etl.. "Project Management" 1st edition, Wiley India, 2009.
3. John M. Nicholas, "Project Management for Business and Technology", 2nd edition, Pearson Education.
4. Joel Henry, "Software Project Management, A realworld guide to success", Pearson Education, 2008.
5. Gido and Clements, "Successful Project Management", 2nd edition, Thomson Learning.
6. Hughes and Cornell, "Software Project Management", 3rd edition, Tata McGraw Hill
7. Joseph Phillips, "IT Project Management", 2nd edition, Tata McGraw Hill
8. Robert K. Wyzocki and Rudd McGary, "Effective Project Management", 3rd edition, Wiley
9. Brown, K.A. Project Management, McGraw Hill, 2002.
10. EBook – Project Management Body of Knowledge.
11. Dinsmore, P. C. (Ed.). (1993) The AMA Handbook of Project Management. AMACOM

4.6 IT Infrastructure Management-100 Marks- 15 Sessions of 3 Hours Semester IV

SL.No	Particulars	Sessions
1.	The need for IT Infrastructure Management IT Infrastructure Management Overview – ITIL Model	**2 Sessions of 3 Hours**
2.	Organizing and managing people Managing System Development	**3 Sessions of 3 Hours**
3.	Capacity Planning Availability Management	**3 Sessions of 3 Hours**
4.	Change Management Operations Management	**3 Sessions of 3 Hours**
5.	Asset and Facilities management Business Continuity Planning	**2 Sessions of 3 Hours**
6.	Case Studies and Presentations	**2 Sessions of 3 Hours**

Reference Text

1. Rich Schiesser,□ IT Systems Management□
2. E Turban, E Mclean and James Wetherbe, ―Information Technology for Management□
3. Kenneth C Laudon, Jane P Laudon, ―Management Information Systems□ (Parts 2 and 5)
4. Roger S Pressman, ―Software Engineering: A Practitioner‘s Approach□
5. James A O‘Brien, ―Management Information Systems□
6. Walker Royce, ― Software Project Management: A Unified Framework□

Industry Oriented Dissertation

100 Marks