MBA
(OPERATIONS AND PROJECT MANAGEMENT)

Semester
(With Effect from the Academic Year 2013-14)

ELIGIBILITY FOR ADMISSION

Candidates who apply for the degree of MBA shall possess the following qualifications.

(a) AGE LIMIT:

There is no upper Age Limit.

(b) QUALIFICATION:

Any Degree

3. DURATION OF THE COURSE

The course will be conducted for Two years under Semester pattern.

On completion of two years, the students will be awarded **MBA with Respective Specialisation.**

3.1. EXAM : There will be an examination conducted by the University at the end of each Semester.

3.2. PASSING MINIMUM : 50 marks

3.3. MEDIUM OF INSTRUCTION: The Medium of instruction will be English.

LIST OF SUBJECTS AND DETAILED SYLLABUS

SEMESTER	S.No	Title of the Subject
I	1.	Management Theory and Practice
	2.	Organisational Behavior
	3.	Accountancy for Managers
	4.	Managerial Economics
	5.	Statistics for Managers
II	6.	Marketing Management
	7.	Financial Management
	8.	Human Resource Management
	9.	Operations Management
	10.	Research Methods for Business
III	11.	Operations Research
	12.	Strategic Management
	13.	Computer Integrated Manufacturing
	14.	Management Information System
	15.	Advanced Operations Management
IV	16.	Entrepreneurship
	17.	Facilities Location and Process Design
	18.	Product Design and Project Management
	19.	Supply Chain and Logistics Management
	20.	Advanced Maintenance Management
	21.	Final Project Report

21. PROJECT REPORT

Students are required to undertake a Research for in a relevant specialization. They must submit a research report on the relevant specialization guided by the Qualified External Examiner before the end of IV semester. The maximum mark for the research report is 100. The Minimum mark required to pass the Research Report is 50 Percent.

SEMESTER I

PAPER 1 MANAGEMENT: THEORY AND PRACTICE

Objectives: To help students understand Evolution of Management Thought, Concepts, basic functions and recent trends managerial concepts and practices for better business decisions.

UNIT I: Evolution of Management thoughts – Contribution of Selected Management Thinkers – Various approaches to management – contemporary management practice – Managing in global environment – Managerial functions.

UNIT II: Importance of planning – Types of planning – decision making process – Approaches to decision making – Decision models – Pay off Matrices – Decision trees – Break Even Analysis.

UNIT III: Departmentation – Span of Control – Delegation – Centralisation and Decentralisation – Commitees – Line and Staff relationships – Recent trends in organisation structures.

UNIT IV: Process of Recruitment, Selection, Induction Training – Motivation – Leading – Leadership styles and qualities – Communication – process and barriers.

UNIT V: Managements control systems – techniques – Types of control.

REFERENCES

1. Bateman Snell, Management: Competing in the new era, McGraw-Hill Irwin, 2002.
2. Chandan J.S., Management Concepts and Strategies, Vikas Publishing House, 2002.
3. Hellriegel, Jackson and Slocum, Management: A Competency-Based Approach, South Western, 9th edition, 2002.
4. Koontz, Essentials of Management, Tata McGraw-Hill, 5th Edition, 2001.
5. Stephen P. Robbins and David A. Decenzo, Fundamentals of Management, Pearson Education, Third Edition, 2001.
6. Tim Hannagan, Management Concepts and Practices, Macmillan India Ltd., 1997.

PAPER II ORGANISATIONAL BEHAVIOUR

Objectives: To introduce students to framework that are useful for diagnosing problems involving human behaviour, to increase students understanding of psychological and sociological phenomenon that regularly occur in organizations. To understand the dynamics of human organizations and concepts of individual as well as the group level.

UNIT I: Definition, need and importance of organizational behaviour – nature and scope – frame work – organizational behaviour models.

UNIT II: Personality – types – factors influencing personality – theories – learning – types of learners – the learning process – learning theories – organizational behaviour modification. Attitudes – characteristics – components – formation – measurement. Perceptions – importance – factors influencing perception – interpersonal perception. Motivation – importance – types – effects on work behavior.

UNIT III: Organization structure – formation – groups in organizations – influence – group dynamics – emergence of informal leaders and working norms – group decision making techniques – interpersonal relations – communication – control.

UNIT IV: Meaning – importance – leadership styles – theories – leaders Vs managers – sources of power – power centers – power and politics.

UNIT V : Organizational climate – factors affecting organizational climate – importance. Job satisfaction – determinants – measurements – influence on behavior. Organizational change – importance – stability Vs change – proactive Vs reactive change – the change process – resistance to change – managing change. Organizational development – characteristics – objectives – team building. Organizational effectiveness – perspective – effectiveness Vs efficiency – approaches – the time dimension – achieving organizational effectiveness.

REFERENCES

1. Hellriegel, Slocum and Woodman, Organisational Behavior, South-Western, Thomson Learning, 9th edition, 2001

2. Stephen P.Robins, Organisational Behavior, Prentice Hall of India, 9th edition, 2001

PAPER III ACCOUNTANCY FOR MANAGERS

Objectives: To familiarize the students with basic Accounting concepts and Conventions, to make the students understand Financial Statements, to familiarize with the intricacies of accounting, planning and Management and to make them aware about the tools for decision making.

UNITI: Introduction to Financial, Cost and Management Accounting – Accounting Conventions and Concepts- IFRS-Preparation of financial statements: Income

statements and Balance sheet – Segmental Reporting

UNIT II: Financial statement analysis – Ratio analysis-Preparation of Cash Flow Statement-cash flow and funds flow statement analysis

UNIT III: Elements of Cost - Cost Classification - Cost Control & Cost reduction – Methods of costing - Preparation of cost sheet – Activity based costing.

UNIT IV: Basics of Cost Volume Profit (CVP) analysis – BEP analysis- Application of marginal costing in decisionmaking - Basic framework of budgeting-Preparation of Master, flexible and cash budgets- Zero based budgeting

UNIT V: Standard costing-Setting standard costs - Analysis of variance - Significance of Computerized Accounting System

REFERENCES

1. Bhattacharyya, Management Accounting,Pearson,2010
2. Khan,Jain,Management Accounting : Text, Problems and Cases Tata McGraw Hill
3. Kuppapally, Accounting for Managers, Prentice Hall of India,2009
4. Maheswari ,Maheswari Accounting for Management Vikas Publishing 2009
5. Pandikumar, Management Accounting-Theory and Practice, Excel Books 2009
6. Vijayakumar, Accounting for Management,Tata McGraw Hill,2009

PAPER IV MANAGERIAL ECONOMICS

Objectives: To impart knowledge and understanding to students on managerial economics and their application to business decision making.

UNIT I: Meaning and Scope of managerial Economics-Role and Responsibility of A managerial Economist-Fundamentals- concepts - Demand & Supply**:** Law of Demand-Types of Demand-Elasticity of demand-Demand forecasting, Law of Supply, Elasticity of Supply

UNIT II : Macro economic variables – national income, investment, savings, employment, inflation, balance of payment, exchange rate – circular flow of income – national income concepts – measurement of national income – role of economic planning – Indian economic planning.

UNIT : Determination of national income – Keynesian perspective - multiplier – accelerator – business cycle – the role of fiscal policy – Indian fiscal policy and experiences.Demand and supply of money – money market equilibrium – the role of money - monetary policy – Indian perspectives.

UNIT IV: Analysis of inflation and unemployment – the role of economic policies – Indian experiences.

UNIT V: International trade – trade multiplier – linkage model – the role of trade policy – analysis of performance of Indian economy in external sector.

REFERENCES

1. Geetika, Ghosh, Choudhury, Managerial Economics, Tata McGraw Hill 2009
2. Gupta, G.S. Macroeconomics, Theory and Applications, Tata McGraw-Hill
3. Hirschey, Managerial Economics- An integrative Approach, Cengage,2009
4. Mankar ,Business Economics Macmillan India Ltd 2009

PAPER V: STATISTICS FOR MANAGERS

Objectives: To help students understand application of statistics, probability Concepts, basic functions and practical usage for better business decisions.

UNITI: Basic definitions and rules for probability, conditional probability, independent of events, Baye's theorem, random variables, Probability distributions: Binomial, Poisson, Uniform and Normal distributions.

UNIT II Introduction to sampling distributions, sampling techniques, sampling distribution of mean and proportion, application of central limit theorem. Estimation: Point and Interval estimates for population parameters of large sample and small samples, determining the sample size.

UNIT III TESTING OF HYPOTHESIS - Hypothesis testing: one sample and two samples tests for means and proportions of large samples (z-test), one sample and two sample tests for means of small samples (t-test), F-test for two sample standard deviations, Chisquare test for single samples standard deviation. Chi-square tests for independence of attributes and goodness of fit.

UNIT IV NON-PARAMETRIC METHODS - Sign test for paired data. Rank sum test: Mann – Whitney U test and Kruskal Wallis test. One sample run test, rank correlation.

UNIT V CORRELATION, REGRESSION AND TIME SERIES ANALYSIS -

Correlation analysis, estimation of regression line. Time series analysis: Variations in time series, trend analysis, cyclical variations, seasonal variations and irregular variations.

REFERENCES

1. Aczel A.D. and Sounderpandian J., "Complete Business Statistics", Tata McGrawHill
2. Levin R.I. and Rubin D.S., "Statistics for management", Prentice Hall of India

SEMESTER II

PAPER I MARKETING MANAGEMENT

Objectives: It helps students to understand the basic concepts of Marketing Management, understand various marketing tools/models for solving marketing problems and to comprehend various situations and marketing terminologies.

UNIT I: Marketing conceptual frame work – marketing environment – customer oriented organization – marketing interface with other functional areas, marketing in a globalized environment.

UNIT II: Understanding Industrial and individual buyer behavior – influencing factors– responding to buyer behaviour – building customer satisfaction – marketing to organizations and marketing of services **M**arket segmentation – targeting and positioning, developing marketing mix,

UNIT III: Product planning and development – product life cycle – brand management, developing new product -Pricing decisions – channel design and management – retailing and wholesaling – promotion methods. Advertisement and personal selling, public relations.

UNIT IV: Marketing Research- Types, process – tools and techniques – application of marketing research – product launching, demand estimation, advertising, brand preferences, customer satisfaction, retail stores image, customer perception, distribution, customer relationship, competitor analysis and related aspects

UNIT V: Online marketing – web based marketing programmes – emerging now trends and challenges to marketers.

REFERENCES

1. Aakar Day, Kumar, Essential of Marketing Research.
2. Boyd Walker, Marketing Management, McGraw Hill, 2002.
3. Keith Flether, Marketing Management and Information Technology Prentice Hall, 1998
4. Phlip Kortler: Marketing management (Millenium edidtion), Prentice hall of India.
5. Zikmand d'Amico, Marketing South western, Thomson Learning, 2000.

PAPER II FINANCIAL MANAGEMENT

Objectives: Imbibing knowledge about the decisions and decision variables involved in building the asset side of balance sheet of the firm and developing the analytical skills by associating the tools and techniques with the situation and to develop skills for interpretation business information and application of financial theory in corporate investment decisions.

UNIT I: Financial management – An overview, time value of money. Introduction to the concept of risk and return of a single asset and of a portfolio, valuation of bonds and shares option valuation.

UNIT II: Capital Budgeting: Principles and techniques, Nature of capital budgeting, Identifying relevant cash flows, Evaluation Techniques, Payback, Accounting Rate of Return, Net Present Value, Internal Rate of Return, Profitability Index, Comparison of DCF techniques, Project

selection under capital rationing, Inflation and capital budgeting. Concept and measurement of cost of capital, Specific costs and overall cost of capital.

UNIT III: Financial and operating leverage, capital structure, Cost of capital and revaluation, designing capital structure. Dividend policy, Aspects of dividend policy, practical consideration, forms of dividend policy, practical considerations, forms of dividends, share splits.

UNIT IV: Principles of working capital: Concepts, need; Determinants, issues and estimation of working capital, Accounts Receivables Management and factoring, Inventory management, Cash management, Working capital finance, Trade credit, Bank finance and Commercial paper.

UNIT V: Indian capital and stock market, New issues market. Long term finance: Shares debentures and term loans, lease, hire purchase, project financing, venture capital financing.

REFERENCES

1.. Khan M.Y and.Jain P.K, Financial Management, Text, Problems and Cases - Tata McGraw 2. Pandey I.M , Financial Management, Vikas Publishing House Pvt. Ltd.,

PAPER III HUMAN RESOURCE MANAGEMENT

Objectives: To provide the future manager with inputs with a view to Enhancing the appreciation of the Human Resources function as a potential career option, Understanding the interface of the Human Resources function with Operations, Marketing, and Finance functions

UNIT I : Human Resource Philosophy - Changing environments of HRM - Strategic human resource management - Using HRM to attain competitive advantage - Trends in HRM - Organisation of HR departments - Line and staff functions - Role of HR Managers.

UNIT II: Employment planning and forecasting – Recruitment, selection process- Building employee commitment : Promotion from within – Sources- Induction.

UNIT III : Orientation & Training : Orienting the employees, the training process, need analysis, Training -techniques, Developing Managers : Management Development - On-the-job and off-the-job Development techniques using HR to build a responsive organisation. Management Developments - Performance appraisal in practice. Managing careers : Career planning and development - Managing promotions and transfers.

UNIT IV : Establishing Pay plans : Basics of compensation - factors determining pay rate - Current trends in compensation - Job evaluation – Incentives- Practices in Indian organisations.

Statutory benefits - non-statutory (voluntary) benefits - Insurance benefits - retirement benefits and other welfare measures to build employee commitment.

UNIT V : Labour relations -Employee security - Industrial relation-Collective bargaining : future of trade unionism. Discipline administration - grievances handling - managing dismissals and separation. Labour Welfare : Importance & Implications of labour legislations - Employee health - Auditing -Future of HRM function.

REFERENCES

1. Gary Dessler, "Human Resource Management", Seventh edition, Prentice-Hall of India
2. Venkatapathy R.& Assissi Menacheri, Industrial Relations & Labour Welfare, Adithya Publications, CBE, 2001.
3. VSP Roa, Human Resource Management : Text and cases, First edition, Excel Books,

PAPER IV OPERATIONS MANAGEMENT

Objectives: To understand the concepts of Operation Management and its applications in industrial situations and to familiarize the students with various concepts of Operation Planning and Management.

UNIT I Production and Operations Management (POM) – Need, History, System, Types, functions and communication in POM. Computer Integrated Manufacturing and Services Systems. Global /trade operations and supply network applications.

UNIT II: Facility Location Decisions (FLcD) – Selections of country, region and site. Facility Layout Decision (FlyD) – Types (Fixed Position, and Production, Process, Flexible), Methodologies (Distance Minimising, Computer software systems (CRAFT, CORELAP, ALDEP),

UNIT III: Forecasting – Types, Methods (Qualitative and Quantitative), Types of variation in data, Minimising forecasting errors and selection of forecasting methods. Capacity Planning-MRP and MRP II systems Introduction to ERP Line Balancing and performance ratios,

UNIT IV: Material Management (MM) – Handling Technology (Robots, Automated storage and retrieval systems (ASRS) and methods (JIT, / Kanban, ABC Systems).Independent Demand Inventory Models – Fixed order system, Basic EOQ, EBQ Models, Quantity discount models. Dependent Demand Inventory models

UNIT V: Johnson's Algorithm for job sequencing -Use of Gantt charts, Queuing analysis and Critical Ratios as methods for job scheduling. work measurement methods (WM) - Time study, methods-time measurement, Work Sampling, White color measurement and learning curves, Using WM to increase productivity- PERT / CPM – Drawing the network, computation of processing time, floats and critical path. Resource leveling techniques.

REFERENCES

1. Paneer Selvam R., Production and Operations Management, Prentice Hall of India.
2. Sang M Lee and Marc J Schniederjans, Operation Management, All India Publishers

PAPER V RESEARCH METHODS FOR BUSINESS

Objectives: To impart knowledge to evaluate and conduct research on management problems/issues, to provide skills necessary for the conduct of student research projects as a part of the programme requirement and to highlight importance of research in management

UNIT I: Business Research – Definition and Significance – the research process – Types of Research –Research questions / Problems – Research objectives – Research hypotheses – characteristics – Research in an evolutionary perspective – the role of theory in research.

UNIT II: Research Process- Research design – Definition – types of research design – exploratory and causal researchdesign – Descriptive and experimental design – different types of experimental design – Validity of findings – internal and external validity – Variables in Research – Measurement and scaling – Different scales – Construction of instrument – Validity and Reliability of instrument.

UNIT III: Types of data – Primary Vs Secondary data – Methods of primary data collection – Survey Vs Observation – Experiments – Construction of questionaire and instrument – Validation of questionaire – Sampling plan – Sample size – determinants optimal sample size – sampling techniques – Probability Vs Non–probability sampling methods.

UNIT IV: Data Preparation – editing – Coding –Data entry – Validity of data – Qualitative Vs Quantitative data analyses – Bivariate and Multivariate statistical techniques – Factor Analysis - multiple regression and correlation –Application of statistical software for data analysis.

UNIT V Research report – Different types – Contents of report – need of executive summary – chapterization – contents of chapter – report writing – the role of audience – readability – comprehension –report format – title of the report – ethics in research – ethical behaviour of research

REFERENCES

1. Alan Bryman and Emma Bell, Business Research methods, OUP.
2. Cooper and Pamela Business Research methods , Tata Mc Graw Hill, 2006.
3. Uma Sekaran, Research methods for Business, Wiley India, New Delhi, 2006.

SEMESTER III

PAPER I OPERATIONS RESEARCH

Objectives: To provide a formal quantitative approach to problem solving and an intuition about situations where such an approach is appropriate, to introduce some widely-used mathematical models. The understanding of these models will allow the students to communicate with persons who run them and to evaluate the results they present and to provide a tool that the students can use to solve management problems.

UNIT I: Introduction to applications of operations research in functional areas of management. Linear programming- Formulation, Solution by graphical and simplex methods, Special cases, Dual simplex method, Principles of duality, Sensitivity analysis.

UNIT II: Transportation models (minimizing and maximizing cases) –Balanced and unbalanced cases –Initial basic feasible solution by N-W corner rule, least cost and Vogel's approximation methods. Check for optimality. Solution by MODI /Stepping stone method. Cases of degeneracy. Transshipment models.

UNIT III: Solution to pure and mixed integer programming problem by Branch and bound and cutting plane algorithms. Game theory-Two person zero sum games-saddle point, Dominance Rule, Convex Linear combination (averages), methods of matrices, graphical and LP solutions.

UNIT IV: Dynamic programming (DP) – Deterministic cases – Maximizing and minimizing problems. DP techniques for LP problems. Decision making under risk – Decision trees – Decision making under uncertainty. Application of simulation techniques for decision making.

UNIT V QUEUING THEORY AND REPLACEMENT MODELS -Queuing theory – single and multi-channel models – Infinite number of customers and infinite calling source. Replacement models –Individual replacement models (with and without time value of money) – Group replacement models.

REFERENCES

1. Paneerselvam R., Operations Research, Prentice Hall of India,

2. Toha, "Operations Research", Tata Mc Graw Hill

PAPER II STRATEGIC MANAGFEMENT

Objectives: The Objective of the course is to enable students have a grasp of various business strategies in general and functional management areas. It will provide a strategic orientation in conduct of the business.

UNIT I: Conceptual framework for strategic management, the Concept of Strategy and the Strategy Formation Process – Stakeholders in business – Vision, Mission and Purpose – Business definition, Objectives and Goals - Corporate Governance and Social responsibility

UNIT II External Environment - Environmental Threat and Opportunity Profile (ETOP) – SWOT- Porter's Five Forces Model-Strategic Groups Competitive Changes during Industry Evolution- Globalisation and Industry Structure - National Context and Competitive advantage Resources- Avoiding failures and sustaining competitive advantage-

UNIT III The generic strategic alternatives – Stability, Expansion, Retrenchment and Combination strategies - Business level strategy- Strategic analysis and choice -OCP - Strategic Advantage Profile - Corporate Portfolio Analysis - SWOT Analysis - GAP Analysis - Mc Kinsey's 7s Framework - GE 9 Cell Model - Distinctive competitiveness - Selection of matrix - Balance Score Card

UNIT IV : The implementation process, Resource allocation, Designing organisational structure-Designing Strategic Control Systems- Matching structure and control to strategy-Implementing Strategic change-Politics-Power and Conflict-Techniques of strategic evaluation & control

UNIT V: Managing Technology and Innovation- Strategic issues for Non Profit organizations-New Business Models and strategies for Internet Economy

REFERENCES

1. Azhar Kazmi, Strategic Management & Business Policy, Tata McGraw Hill, Third Edition
2. Thomas L. Wheelen, J.David Hunger and Krish Rangarajan, Strategic Management and Business policy, Pearson Education., 2006

PAPER III COMPUTER INTEGRATED MANUFACTURING

Course Objective

The objective of this course is to expose the students to the role of computer in the manufacturing process. It also aims to improve the understanding of students about the technological aspects and the implementation issues computer integrated manufacturing.

UNIT I

Computer Integrated Manufacturing – Definition, Concept, Evolution and Benefits - Types of Manufacturing Systems and Sub-systems – Automated Systems – Elements, Functions and Levels.

UNIT II

Hardware, Software and Security Requirements for implementing CIM systems - Communication Systems for CIMS – Communications Matrix – Network architectures and Techniques - Creating and maintaining a manufacturing systems database.

UNIT III

Fundamentals of Design for Manufacturing (DFM) - Computer Aided Design (CAD) - 3D Modeling packages - Finite Element Analysis packages and Transportability - NC, CNC and DNC machines - Introduction to part-programming - Tool Management - Data Logging and acquisition - Automated data collection.

UNIT IV

Manufacturing Systems – Components, Classifications and Functions – Flexible Manufacturing Systems(FMS) – Components, Applications and benefits - Planning and Implementation issues in FMS - Group Technology – Part-Families - Classification and Coding.

UNIT V

Concurrent Engineering - Role of Expert Systems in CIMS - Robotics-Overview - Types in CIMS - Automated Guided Vehicles – Types and Technology – Control - Overview of Automated Assembly systems-Lean Production –Agile Manufacturing

REFERENCES

1. Mikell P.Groover, Automation, "Production Systems and Computer Integrated Manufacturing" PHI, 2001.
2. Ronald G.Askin, "Modelling and Analysis of manufacturing" John Wiley & Sons, 1993.
3. Vajpayee Kant. S, Principles of Computer Integrated Manufacturing, Prentice Hall India, Second Indian Reprint, 2005.

PAPER IV: MANAGEMENT INFORMATION SYSTEM

Objectives: Make the students to understand the interface of the Human Resources function with Operations, Marketing, and Finance functions and to impart knowledge on information systems and its relevance to business decisions.

UNIT I : Human Resource Philosophy - Changing environments of HRM - Strategic human resource management - Using HRM to attain competitive advantage - Trends in HRM - Organisation of HR departments - Line and staff functions - Role of HR Managers.

UNIT II: Employment planning and forecasting – Recruitment, selection process- Sources- Induction-Orientation & Training - Management Development - On-the-job and off-the-job- Management Developments - Performance appraisal in practice. Managing careers : Career planning and development - Managing promotions and transfers.

Unit III : Establishing Pay plans : Basics of compensation - factors determining pay rate - Statutory benefits - non-statutory (voluntary) benefits - Labour relations - Industrial relation- Discipline administration - grievances handling - managing dismissals and separation.

UNIT IV: Foundations of Information Systems: A framework for business users - Roles of Information systems - System concepts - Organisation as a system - Components of Information Systems - IS Activities - Types of IS-HRIS: Function, Usage and Application.

UNIT V: DSS: DSS models and software: The decision making process - Structured, Semi Structured and Unstrcutured problems; Managing Information Technology: Managing Information Resources and technologies - Security and Ethical Challenges: IS controls - facility control and procedural control

References

1. Gary Dessler, "Human Resource Management", Seventh edition, Prentice-Hall of India
2. James A O'Brien, "Management Information Systems", Tata McGraw Hill.
3. VSP Rao, Human Resource Management : Text and cases, First edition, Excel Books
4. Waman S Jawadekar , "Management Information System Text and cases", TMH

PAPER V:ADVANCED OPERATIONS MANAGEMENT

Course Objective

The objective of this course is to enable the students to understand the advanced techniques of operations management. It also helps the students to gain an insight into the trends in operations management.

UNIT I

Current challenges in Operations management - Product development considerations - Value engineering, concurrent engineering, Robust design - Modular design - Selection and Justification of Advanced Manufacturing Technology.

UNIT II

Strategic capacity planning for products and services - Scheduling for batch processing – The design and scheduling of flow processing system – Production planning and control - Routing, sequencing, loading, scheduling – master scheduling.

UNIT III

Operating value chains – Information technology - value chain – Material management - supply chain – Special inventory models, Selective inventory control, Operations decision making tools – Acceptance sampling.

UNIT IV

Recent Trends in operations management – Lean manufacturing - Resource requirement planning, Synchronous manufacturing - theory of constraints – Agile Manufacturing

UNIT V

Cases in operations management

REFERENCES:

1. Mohanty R. P. and S. G. Deshmukh, Advanced operations management, Pearson Education, First Edition,
2. Lee J. Krajewski and Larry P. Ritzman,Operations management : Processes & Value chains, Indian adaptation, Pearson education
3. Richard Chase and Nicolas Aquilano, Operations Management for Competitive advantage Tata McGraw Hill Publishers, tenth edition
4. Ray wild, Operations Management, Thomson Publishers, Sixth Edition.
5. William Stevenson, Operations management, Tata McGraw Hill Publishers, eighth edition.
6. Roberta S. Russell and Bernard W. Taylor, Operations Management , Pearson Education.
7. Norman Gaither and Greg Frazier, Operations Management, Thomson Publishers, Ninth edition.

SEMESTER IV

PAPER I : ENTREPRENEURSHIP

Objectives: To enable the students have entrepreneurial motivation by providing the basic idea of entrepreneurship, business ideas, project writing and new venture creation

UNIT I: Entrepreneurship concept – Entrepreneurship as a Career – Entrepreneurial Personality - Characteristics of Successful, Entrepreneur – Knowledge and Skills of Entrepreneur.

UNIT II: Business Environment - Role of Family and Society - Entrepreneurship Development Training and Other Support Organisational Services - Central and State Government Industrial Policies and Regulations - International Business.

UNIT III : Business Idea- Idea generating Techniques- Sources of Product for Business - Prefeasibility Study - Criteria for Selection of Product - Ownership - Capital - Budgeting Project Profile Preparation - Matching Entrepreneur with the Project - Feasibility Report Preparation and Evaluation Criteria- Venture Creation.

UNIT IV: Finance and Human Resource Mobilization Operations Planning - Market and Channel Selection - Growth Strategies - Product Launching- Role of Venture Capitalists and Angel Investors in promoting entrepreneurship.

UNIT V: Monitoring and Evaluation of Business - Preventing Sickness and Rehabilitation of Business Units- Effective Management of small Business.

REFERENCES

1. Hisrich, Entrepreneurship, Tata McGraw Hill, New Delhi, 2001.

2. Khanka S.S., Entrepreneurial Development, S.Chand and Company Limited

3.Mathew Manimala, Entrepreneurship Theory at the Crossroads, Paradigms & Praxis, Biztrantra ,2nd Edition ,2005

PAPER II: FACILITIES LOCATION AND PROCESS DESIGN Course Objective

This course has the objective of enhancing the understanding of the students of location and layout decisions. It also helps the students to gain an insight into the organisational nuances and implementation issues.

UNIT I

Facilities requirements, need for layout study – types of layout, Model Classification, Criterion Selection, Model Validation, Design Process.

UNIT II

Layout problems - Plant layout procedures- various approaches - Flow and activity analysis - Designing the layout

UNIT III

Plant location analysis – factors, costs, location decisions – simple problems in single facility location problems - multi-facility location problems - network location problems.

UNIT IV

The Process View of Organizations - Performance Measures, Product Attribute and Process Competencies - Process Design - Planning and Control - Strategic Positioning and Operational Effectiveness - Strategic Fit, Matching Products and Processes - Operations Frontier and Trade-offs

UNIT V

Process Flow - Key Measures - Flow Time - Flow Rate - Inventory Analysis -Process Flow Chart - Flow Time Measurement - Flow-Rate and Capacity Analysis - Managing Flow Variability - Process Integration- Lean operations – Process Synchronization and Improvement

REFERENCES

1. Halevi G.and R.D.Weill, "Principles of Process Plannning" Chappman and Hall, Madras 1995.
2. Raví Anupindi, Sunil Chopra, Sudhakar Deshmukh,Jan A. Van Mieghem, and Eitan Zemel, "Managing Business Process Flows: Principles of Operations Management" Pearson Education, 2006
3. Richard Francis, L. Leon McGinnis, F. Jr., John White, A., "Facility Layout and Location - an Analytical Approach", Prentice Hall of India., 2nd Ed.

PAPER III :PRODUCT DESIGN AND PROJECT MANAGEMENT

Course Objective

This course has the objective of enhancing the understanding of the students of product design and project management. It also helps the students to gain an insight into the process of product design and the functions and implementation issues of project management.

UNIT – I

Defining Product, Types of products. Successful Product development – characteristics, duration and cost, challenges. Development Process: Generic Process- Adapting to product types - Stage gate model - New Service Development Process

UNIT – II

Product Planning Process – Product Life Cycle - Technology Life Cycle –- Disruptive Technologies- Product Specification - Concept Generation – Brain Storming

UNIT – III

Concept Selection – Concept Screening - Concept Scoring - Concept Testing- Product Architecture - Platform Planning - Robust Design- Collaborative Product development

UNIT – IV

Project - Definition –Scope – Significance – Project Proposal - Project management – Functions - organization - planning - human aspects and pre-requisites.

UNIT – V

Project Monitoring and Control – Project Report – Types and Format – Project Evaluation – Types and Methodology – Appraisal Report

REFERENCES

1. Bruce T. Barkley, Project Management in New Product Development, Tata McGraw Hill, 2008.
2. Chitale A.K. and R.C. Gupta, Product Design and Manufacturing, PHI, 2008.
3. Deborah E. Bouchoux, Intellectual Property Rights, Delmar, Cengage Learning, 2005.
4. Karl T. Ulrich and Steven D. Eppinger, Product Design and Development, Tata McGraw – Hill, Third Edition, reprint 2008.
5. Kerber, Ronald L, Laseter, Timothy M., Strategic Product Creation, Tata- McGraw Hill, 2007.
6. Stevel. E. Pauley, Daniel G.Riordan – Technical Report Writing Today – AITBS Publishing & Distributors, India 5th edition – 2000.

PAPER IV :SUPPLY CHAIN AND LOGISTICS MANAGEMENT
Course Objective

The objective of this course is to enable the students to understand the scope and significance of supply chain and logistics management. It also expose the students to the structural framework and the functional implications of logistics.

UNIT I

Supply Chain management and logistics management – Definition - Evolution. Supply Chain – Fundamentals - and Importance. Supply chain strategy - Drivers of Supply Chain Performance - Supply Chain relationships

UNIT II

Logistics – functions, objectives - solution- Customer Service - Warehousing and Material Storage - Material Handling, Transportation and Packaging – 3PL and 4PL.

UNIT III

Distribution - Network Design – Role, Factors Influencing, Options, Value Additions. Models for Facility Location and Capacity allocation - Impact of uncertainty on Network Design - Network Design decisions using Decision trees.

UNIT IV

Sourcing – Make or buy decision, Creating World Class Supply base, World Wide Sourcing Inventory Management – managing cycle inventory, safety inventory. Value of information, Bullwhip effect, Coordination in supply chain, Analysing impact of supply chain redesign on the inventory

UNIT V

E-Business – Framework and Role of Supply Chain in e- business and b2b practices. Supply Chain IT Framework - E-Supply Chains, E – Logistics- eSCM - Agile Supply Chains - Reverse Logistics - Global Logistics.

REFERENCES

1. Altekar Rahul V, Supply Chain Management-Concept and Cases, Prentice Hall India,2005.
2. Bowersox Donald J, Logistical Management – The Integrated Supply Chain Process" Tata McGraw Hill, 2000
3. Donald J. Bowersox, David J. Closs and M. Bixby Cooper, "Supply Chain Logistics Management", Tata McGraw Hill, 2008
4. Joel D. Wisner, G. Keong Leong, Keah-Choon Tan, "Principles of Supply Chain Management- A Balanced Approach", South-Western, Cengage Learning 2005
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PAPER V :ADVANCED MAINTENANCE MANAGEMENT

Course Objective

This course has the objective of imparting in-depth knowledge to the students with respect to maintenance management. It also helps the students to gain an insight into the advanced techniques and trends in maintenance management

UNIT I

Objectives and functions of Maintenance, Types, Maintenance Strategies - Organization for Maintenance. Five Zero Concept

UNIT II

MTBF, MTTF, Useful Life – Survival Curves – Repair Time Distribution - Breakdown time distributions, Poisson, Exponential and Normal distribution - Availability of repairable Systems
– Maintainability Prediction – Design for Maintainability.

UNIT III

Overhaul and Repair - Meaning and Difference – Optimal overhaul/Repair/Replace maintenance policy for equipment subject to breakdown - Optimal interval between preventive replacement of equipment subject to breakdown - group replacement

UNIT IV

Fixed Time Maintenance - Condition based Maintenance- Operate to Failure - opportunity maintenance - Design out maintenance - Total Preventive maintenance.

UNIT V

Reliability Centred Maintenance (RCM) – Total Productive Maintenance (TPM) - Philosophy and Implementation - Signature Analysis – MMIS – Expert Systems – Concept of Tero technology. Reengineering maintenance process.

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