

**MASTER OF BUSINESS ADMINISTRATION**

**(E-Business)**

**SYLLABUS**



**2021-2023**

**Faculty of Management Studies**

**Mohanlal Sukhadia University**

**UDAIPUR (RAJ.)**

## THE PROGRAMME

The Master of Business Administration (E Commerce) is a two-year full-time program. The course structure and program administration are as follows:

### COURSE STRUCTURE

The programme has been organized in two years-First Year and Second Year, each year comprising two semesters. The list of papers offered during First Year and Second Year of the programme shall be as follows:

<b>FIRST YEAR</b>	<b>SECOND YEAR</b>
<b>(I- SEMESTER)</b>	<b>(III – SEMESTER)</b>
MEC -101 Management Process and Organizational Behavior	MEC-301 E-Commerce Progression
MEC -102 Quantitative Methods	MEC-302 Digital Marketing
MEC-103 Managerial Economics	MEC-303 E-advertising
	MEC-304 Managing E Channels
	MEC-305 Logistics and Supply Chain Management
	MEC -306 Marketing Research
	MEC -311 Entrepreneurship Development
	MEC- 312 Summer Training Project Report
MEC-104 Environment and Management	<b>Summer Training:</b> At the end of second semester, all students will have to undergo summer training of probably 6 to 8 weeks with an organization by taking up a project study.
MEC -105 Business Communication	
MEC- 106 Business Legislation and Ethics	
MEC- 107 Accounting for Managers	
MEC-108 Computers and MIS	
<b>(II- SEMESTER)</b>	<b>(IV SEMESTER)</b>
MEC -201 Fundamentals of E-Commerce	
MEC -202 Business Policy and Strategic Analysis	MEC – 401 E- Business Philosophy
	MEC – 402 Business Technologies & Trends
	MEC – 403 Warehouse Management & Data Mining
	MEC – 404 Business Analytics
	MEC -411 Major Research Project
MEC -203 Human Resource Management	<b>Major Research Project:</b> Major Research Project study shall commence in the <b>beginning of fourth semester</b> and will have two papers weight. It may be Industry oriented internship cum project or departmentally allocated research project.
MEC-204 Financial Management	
MEC -205 Marketing Management	
MEC-206 Production and Operations Management	
MEC-207 Research Methodology	
MEC-208 International Environment and Management	

\* A choice of 18 specialization papers is available but 10 specialization papers to be offered in final year will be announced by Course Director looking at concurrent

**demand of industry. No further choice of papers will be offered in addition to specialization papers announced.**

## **PROGRAMME ADMINISTRATION (*SUGGESTED GUIDELINES*)**

### **Evaluation**

- (i) Each paper will carry 100 marks (except MEC- 411) of which minimum of 20% of marks should be for internal assessment and remaining percentage of marks is for written examination. The duration of written examination for each paper shall be three hours.
- (ii) The internal assessment marks shall be based on factors such as: Participation in seminars, case discussions and group work activities
  - \* Class tests, quizzes, individual and group oral presentations
  - \* Submission of written assignments, term papers and viva-voce
  - \* Class-room participation and attendance

There will be one midterm class test which will carry 10 marks. If any candidate does not appear in any of the midterm tests on medical or other valid grounds, he may appear in the defaulter test by depositing a fee of Rs. 150/- per course.

The course for the midterm test will be first three units but the defaulter test coverage will be entire course.

Home Assignment will carry 05 marks while individual and group presentation and attendance will carry 05 marks.
- (iii) The scheme of evaluation of project studies shall be as follows:
  - (a) For Paper MEC-312, a project report based on the summer training will have to be submitted within five weeks from the commencement of third semester. The viva-voce to be conducted by a duly constituted examination board shall account for 80% of marks and the remaining 20% of marks of internal evaluation are to be awarded by faculty members which will account for the written portion of the project report.
  - (b) Paper MEC-411, final Major Research project study shall commence in the beginning of fourth semester and the report should be submitted towards the end of fourth semester. This research project will carry 200 marks weight. The candidate has to approach specialization related industry and in joint supervision of Industry representative and Faculty members of FMS, the Project is to be completed. The project may even be in form of major research project in relevant field which can be completed either in the campus or in the relevant industry. The written part and the viva-voce to be conducted by a duly constituted examination board for the specialization-oriented project studies shall account for 80% of marks and the remaining 20% of marks of internal evaluation are to be awarded by faculty members which will account for the written portion of the project.

## **Promotion and Span Period**

- (i) The span period of the programme is four years from the date of registration in the programme.
- (ii) The minimum marks for passing the examination for each semester shall be 40% in each paper and 50% in aggregate for all the courses of the semester.
- (iii) To be eligible for promotion to the second year of the programme, a student must clear successfully at least 12 papers out of the 16 papers offered during first year of the programme.
- (iv) The degree shall be awarded to successful students on the basis of the combined results of first year and second year examinations as follows:
  - Securing 60% and above : Ist Division -
  - All other : IInd Division
- (v) A student to be eligible for award of degree has to clear all the papers offered during two-year programme within the span period.
- (vi) The candidates will be required to pass in the external examination of 80 marks.

*The Institute/University may evolve their own Grading System for evaluation.*

## **Re-examination**

A candidate who has secured minimum marks to pass in each paper but has not secured the minimum marks required to pass in aggregate for the semester concerned may take re-examination in not more than two papers to obtain the aggregate percentage required to pass the semester.

A regular student will be allowed to re-appear in any paper in any semester. However, the total number of attempts for a paper shall not exceed four during the span period of the programme. As regards the ex-students, they will be allowed to re-appear in papers only in the semester examination when held, subject to total number of attempts for a paper not exceeding four years during the span period of the programme.

## **Attendance**

No candidate shall be considered to have pursued a regular course of study unless he/she is certified by the Head/Dean of the Department/Faculty to have attended the three-fourths of the total number of classroom sessions conducted in each semester during his/her course of study. Any student not complying with this requirement will not be allowed to appear in the semester examination. However, the Head/Dean may condone the required percentage of attendance by not more than 10 per cent during a semester.

A student not allowed to appear in the preceding semester examination due to shortage of attendance, may appear in the papers of the proceeding semester along with the papers of current semester after making up the attendance shortfall. Remedial classes, however, will not be arranged by the Department/ Faculty for the purpose.

# **Semester - I**

## **MEC-101 to MEC-108**

### **MEC-101: Management Process and Organizational Behavior**

#### **Objectives**

The objective of this paper is to familiarize the student with basic management concepts and behavioral processes in the organization.

#### **Course Contents**

I. Evolution of management thought, Systems and contingency approach for understanding organizations, managerial processes, functions, skills and roles in an organization; Social Responsibility of Business; Leadership: Concept, Nature, Importance, Attributes of a leader, developing leaders across the organization, Leadership Grid. Decision making: Concept, Nature, Importance, and Process. Types of decisions. Problems in decision making.

II. Introduction to Organizational Behavior: Definition, Importance, Scope, Fundamental Concepts of OB, Different models of OB - autocratic, custodial, supportive, collegial and SOBC. Personality & Attitudes: Meaning of personality, attitude - Development of personality – Attributes of personality- Transactional Analysis – Ego states – Johari window - Nature and dimensions of attitude – Developing the right attitude

III. Motivation: Definition, Importance, Motives – Characteristics, Classification of motives - Primary & Secondary motives. Theories of Motivation – content and process theories. Morale - Definition and relationship with productivity - Morale Indicators.

IV. Group Dynamics and Team building: Concept of Group & Team. Theories of Group Formation - Formal and Informal Groups. Importance of Team building. Conflict Management: Definition. Traditional vis-à-vis Modern view of conflict – Types of conflict – Intrapersonal, Interpersonal, and Organizational. Constructive and Destructive conflict. Conflict management.

V. Stress management: Definition, Causes, Managing stress, Stress as a motivator. Work life balance. Applications of emotional intelligence in organizations, communication, group decision making, Understanding and Managing organizational system - Organizational design and structure, Change management: Concept of change, change as a natural process, Importance & Causes of change – social, economic, technological, organizational. Learning – unlearning, Concept of learning organizations.

### **Suggested Readings**

1. *Koontz, H. and Wehrich, H. Management. 10th ed., New York, McGraw Hill, 1995.*
2. *Luthans, F. Organizational Behaviour. 7th ed., New York, McGraw Hill, 1995.*
3. *Robbins, S P. Management. 5th ed., New Jersey, Englewood Cliffs, Prentice Hall Inc., 1996.*
4. *Robbins, S P. Organizational Behaviour. 7th ed., New Delhi, Prentice Hall of India, 1996.*
5. *Singh, Dalip Emotional Intelligence at Work, Response Books, Sage Publications, Delhi,2001*
6. *Staw, B M. Psychological Dimensions of Organizational Behaviour. 2nd Ed., Englowed Cliffs, New Jersey, Prentice Hall Inc., 1995.*
7. *Stoner, J. etc. Management.6th ed., New Delhi, Prentice Hall of India, 1996.*
8. *Sundar, K. Elements of Organisational Behaviour. Vijay Nicole Imprints Private Limited, Chennai.*
9. *Sundar, K. Principles of Management. Vijay Nicole Imprints Private Limited, Chennai.*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-102: Quantitative Methods**

### **Objectives**

The objective of the course is to make the students familiar with some basic statistical and linear programming techniques. The main focus, however, is in their applications in business decision making.

### **Course Contents**

- I. Matrices and their Application, Markov's Analysis, Functions and Progressing of Business applications.
- II. Frequency Distribution and their Analysis; Measures of Central Tendency, Standard Deviation, Variance.
- III. Correlation and Regression Analysis, Time Series Analysis and Forecasting.
- IV. Probability Theory and Probability Distributions - Binomial, Poisson, Normal and Exponential.
- V. Evolution of Management Science, Linear Programming - Basic concepts, Model Formulation, Solution Methods, Duality, Transportation and Assignment, Decision Theory and Decision Trees, Quantitative Methods Packages.

### **Suggested Readings**

1. *Chadha, N. K. Statistics for Behavioral and Social Scientists, Reliance Publishing House, Delhi, 1996*
2. *Gupta, S P and Gupta M P. Business Statistics. New Delhi, Sultan Chand, 1997.*
3. *Kazmier, L J and Pohl, N F. Basic Statistics for Business and Economics. New York, McGraw Hill, 1988.*
4. *Levin Richard I and Rubin David S. Statistics for Management. New Jersey, Prentice Hall Inc., 1995.*
5. *Narag, A S. Linear Programming and Decision Making. New Delhi, Sultan Chand, 1995.*
6. *Sharma, J.K. Fundamentals of Operations Research, Macmillan, New Delhi, 2001*
7. *Terry, Sineich. Business Statistics by Examples. London, Collier Mac Millian Publishers, 1990*
8. *N.D Vora*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-103: Managerial Economics**

### **Objectives**

The Objectives of this course is to acquaint the participants with concepts and techniques used in Micro-Economic Theory and to enable them to apply this knowledge in business decision-making. Emphasis is given to changes in the nature of business firms in the context of globalization.

### **Course Contents**

1. Nature and Scope of Managerial Economics, Application of Economics in managerial decision-making, macro vs micro economics, basic principles of managerial economics. Demand functions, Law of Demand - Utility Concept, Cardinal and Ordinal Approach, Income and substitution effects.
2. Elasticity of Demand - Price Elasticity, Income Elasticity, Cross Elasticity Advertising Elasticity, Demand forecasting, concept of consumer surplus.
3. Production Function- Concept, Isoquants, Equilibrium, Law of Variable Proportions, Law of Returns to Scale, economies of scale, Cost Function- Types of Costs, theory of firm – profit maximization, sales maximization, revenue curves- TR, AR, MR, Long run and short run.
4. Market Structure: Concept of Equilibrium, Perfect Competitions, Monopoly, Monopolistic, Oligopoly: Kinked demand curve, Game theory, Price leadership model, Full cost pricing, Baumol's theory of sales revenue maximization, Williamsons' Managerial discretionary Theory, Cyert & March behavioral Theory. Theoretical Concept of Pricing, Pricing Polices in Practices, Non-Price Competition.
5. Macro Economics: Aggregates and Concepts, Aggregate Consumption- Aggregate Demand, Concept and Measurement of National Income; Determinant of National Income, Money multiplier Effect & Accelerator, GNP and GDP, Balance of Payments, Monetary Policy Fiscal Policy; Business cycle.

### **Suggested Readings**

1. *Adhikary, M. Business Economics., New Delhi, Excel Books, 2000.*
2. *Baumol, W J. Economic Theory and Operations Analysis. 3rd ed., New Delhi, Prentice Hall Inc., 1996.*
3. *Chopra, O.P. Managerial Economics. New Delhi Tata McGraw Hill 1985.*
4. *Keat, Paul G & Philips K. Y. Young, Managerial Economics, Prentice Hail, New Jersey, 1996.*
5. *Koutsoyiannis, A. Modem Micro Economics. New York, Macmillan, 1991.*
6. *Milgrom, P and Roberts J. Economics, Organization and Management. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1992.*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.



## **MEC-104 Environment Management**

### **Course Contents**

1. Environmental Management: Fundamentals-Sustainable Development, Implications of human population growth, Limits to growth, Environment and Business Schools; Energy Management: Fundamentals -Fossil Fuels use, Energy production and trade, Energy Balance.
2. Ecosystem Concepts: Basic Concepts and their application in Business, Industrial Ecology and Recycling Industry; Environmental Management System: EMS Standards, ISO 14000.
3. Environmental Management & valuation: Environmental Auditing. Clearance/Permissions for establishing industry Environmental Accounting, Economics - Environmental Taxes Shifts, Green Funding, Corporate Mergers.
4. Environmental Management Trade and Environmental Management, Debt and Environment, GATT / WTO Provisions, Green funding, Environmental Laws: Acts, Patents, IPRS, Role of NGO'S, PIL.
5. Pollution & Waste Management - Air, Water, Land Pollution, Trade in Wastes; Water, Forest & Biodiversity Management: Water Resources, Dams and their role; Forest products and Trade. Role of Biodiversity in International Trade; Approaches to Corporate Ethics; Bio-ethics, Environmental ethics.

### **Suggested Readings**

1. Uberoi, N.K.; *Environmental Management, Excel Books, A-45, Naraina Phase-I, New Delhi, 2000*
2. Pandey, G.N.: *Environmental Management, Vikas Publishing House New Delhi, 1997*
3. Gupta, N. Dass: *Environmental Accounting, Wheeler Publishing, 19, K.G. Marg, New Delhi, 1997*
4. Mohanty, S.K.: *Environment & Pollution Law Manual, Universal Law Publishing, G.T. Karnal Road, New Delhi, 1996*
5. Harley, Nick : *Environmental Economics, MacMillan India Ltd., Ansari Road, New Delhi, 1997*
6. Kolstad, Charles D.: *Environmental Economics, Oxford University Press, 2000*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-105: Business Communication**

### **Objectives**

The course is aimed at equipping the students with the necessary & techniques and skills of communication to inform others inspire them and enlist their activity and willing cooperation in the performance of their jobs.

### **Course Contents**

- I.. Importance and nature of business communication; Effective Communication skill; Process of communication; Barriers and gateways in communication; Intra personal communication and body language; Inter personal communication and relationship; Leadership skills; Team building and public speaking; Presentation skills; Case study and situational analysis
- II. Dos and Don'ts of Business writing; Commercial letters; Writing Business reports; Written communication - 7'c of written business communication, Approaches to written communication - deductive and inductive; Writing for enquiries , Claims, invitation, reservations and orders, refusal and collection letters, sales letters, resume writing and recommendation letters; Report writing- long and short business reports and business proposal.
- III. Feelings- types and steps to deal with complex feelings; Assertiveness and confidence building; Body language- role of different parts of the body in communication; Non-verbal behavior; Emotions- emotional empathy and emotional intelligence.
- IV. Techniques for personality development (a) self confidence (b) mnemonics (c) goal settings (d) time management (e) effective planning (f) stress management.
- V. Developing an understanding of social etiquettes; Dressing for interview- do's and don'ts for men and women; Dressing for office-do's and don'ts for men and women; Dining etiquettes; Telephone and email etiquettes; Ethical dilemmas- code of conduct.

### **Suggested Readings**

1. Bowman, Joel P and Branchaw, Bernadine P. "Business Communication: From Process to Product". 1987. Dryden Press, Chicago.
2. Hatch, Richard. "Communicating in Business". 1977 Science Research Associates, Chicago.

3. Murphy, Herta A and Peck, Charles E. "Effective Business Communications". 2nd ed. 1976. Tata McGraw Hill, New Delhi.
4. Pearce, C Glenn etc. "Business Communications: Principles and Applications". 2nd ed. 1988. John Wiley, New York.
5. Treece, Maira. "Successful Business Communications". 3rd ed. 1987. Allyn and Bacon Boston.
6. Sundar, K. *Business Communication*. Vijay Nicole Imprints Private Limited, Chennai.

## **MEC-106: BUSINESS LEGISLATION**

### **Objectives**

The course is designed to assist the students in understanding basic laws affecting the operations of a business enterprise.

### **Course Contents**

- I. The Indian Contract Act, 1872: Essentials of a Valid Contract. Void Agreements. Performance of Contracts. Breach of Contract and its Remedies. Quasi-Contracts.
- II. The Sale of Goods Act, 1930 : Formation of a Contract. Rights of an Unpaid Seller. Consumer Protection Act and Cyber Laws.
- III. The Negotiable Instruments Act, 1881: Nature and Types. Negotiation and Assignment. Holder-in-Due Course, Dishonour and Discharge of a Negotiable Instrument. Arbitration.
- IV. The Companies Act, 2013; Nature and Types of Companies. Formation. Memorandum and Articles of Association. Prospectus Allotment of Shares. Shares and Share Capital. Membership. Borrowing Powers. Management and Meetings.
- V. Accounts and Audit. Compromise Arrangements and Reconstruction. Prevention of Oppression and Mismanagement. Winding Up.

### **Suggested Readings**

1. *Avtar Singh. Company Law. 11th ed. Lucknow, Eastern, 1996.*
2. *Khergamwala, J S. The Negotiable Instrument Acts. Bombay, N.M. Tripathi, 1980.*
3. *Ramaiya, A. Guide to the Companies Act. Nagpur, Wadhwa, 1992.*
4. *Shah, S M. Lectures on Company Law. Bombay, N.M. Tripathi, 1990.*
5. *Tuteja, S K. Business Law For Managers. New Delhi, Sultan Chand, 1998.*
6. *Sundar, K. Business Ethics And Values. Vijay Nicole Imprints Private Limited, Chennai.*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC- 107: ACCOUNTING FOR MANAGERS**

### **Objectives**

The basic purpose of this course is to develop an insight of postulates, principles and techniques of accounting and utilization of financial and accounting information for planning, decision-making and control.

### **Course Contents:**

#### **Unit -I**

Meaning and Definition of Accounting, Parties or Users interested in Accounting, Branches of Accounting, Meaning and Definition of Management Accounting, Distinction between Management Accounting and Financial Accounting. Accounting Concepts and Conventions.

#### **Unit- II**

Basic Accounting terminologies, Classification of Accounts, Meaning of Journal, Writing of Journal Entries. Secondary Books of Accounting, Preparation of Trial Balance. Elementary knowledge of preparation of financial statement,

#### **Unit -III**

Understanding Financial statements and Annual Reports, Accounting Standards, Financial Statement Analysis, Ratio analysis, Funds Flow Analysis, Cash Flows analysis.

#### **Unit - IV**

Elements of Costs; Materials, Labour and Overheads (elementary idea only), Cost Sheet. Marginal costing – Cost volume profit analysis, BEP, Marginal Costing for Decision Making.

#### **Unit -V**

Budgetary control, Operating and Financial Budgets, Performance Budgeting, Zero-Base Budgeting; Flexible Budgets. Standard Costing – Materials Cost and Labour cost variances only.

### **Suggested Readings**

1. Anthony R N and Reece J S. *Accounting Principles*, 6th ed., Homewood, Illinois, Richard D. Irwin, 1995.
2. Bhattacharya S K and Dearden J. *Accounting for Management Text and Cases*. New Delhi, Vikas, 1996.
3. Heitger, L E and Matulich, Serge. *Financial Accounting*. New York, Mc-Graw Hill, 1990.
4. Hingorani, N L. and Ramanathan, A R. *Management Accounting*. 5th ed., New Delhi, Sultan Chand, 1992.
5. Horngren, Charles etc. *Principles of Financial and Management Accounting*. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1994.
6. Vij, Madhu. *Financial and Management Accounting*. New Delhi, Anmol Publications, 1997
8. Theory & Problems in Management & Cost Accounting - Khan & Jain

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-108: Computers and Information systems**

### **Objectives**

The objective of this course is to build up the experience of computer usage in business organizations with specific reference to commercial data processing systems and understanding of MIS and its application in decision making.

### **Course Contents**

- I. I. Computers - An Introduction – Computers trends and technology in Business; Components of a Computer System; Generations of Computers and Computer Languages; Artificial Intelligence (AI), AI Tools -An Overview. Data Files Types / Organizations, Emerging technology in digital environment.
- II. System and Application Software: Operating System, DOS, Windows and Android, OS commands and functions, Application Software Category. Data Communication and Networking: Topology, LAN, MAN, WAN, Communication Media Wired and wireless. OSI and TCP Model
- III. Office Automation Tools  
Word Processor – Editing, Printing and Formatting of document, Mail merge.  
Electronic Spread sheet – Range, Formulas, Functions, Graphs, Basis statistical formulae. Presentation Tool – Creating an effective presentation.  
DBMS – Data Creation and Manipulation, Data Reports. Other tools of office automation.
- IV Management Information System: Definitions - Basic Concepts, Frameworks, System Development initiative, Different Methodologies - Life Cycle and Prototype approach. Features of various CBIS, Types of Information Systems. - TPS, MIS, DSS, KMS, OAS, experts system: evaluation and control of information systems.
- I. Decision Support System - An Overview: Relevance, scope, characteristics and capabilities, Components, Classification of DSS User Interface graphics menus - Forms, DSS tools - DSS generators, Specific DSS, Constructing a DSS: Steps in designing DSS. GDSS (Group Decision Support System): Introduction and Applications.

### **Suggested Readings :**

1. *Burch, John and Grudnitski Gary. Information Systems: Theory and Practice. 5th ed., New York, John Wiley, 1989.*
2. *David, Van Over. Foundations of Business Systems. Fort Worth, Dryden, 1992.*
3. *Eliason, A L. On-line Business Computer Applications. 2nd ed., Chicago, Science Research Associates, 1987.*
4. *Estrada, Susan. Connecting to the Internet. Sebastopol, C A, O'Reilly, 1993.*
5. *Keen, Peter G.W.: Decision Support System an Organisational Perspective Addison-Wesley Pub.*
6. *Theierauff, Robert J. Decision Support System for-effective planning - - Prentice Hall - 1982.*
7. *Krober,Donald W., and Hugh.J. Watson Computer Based Information System Newyork, 1984*

## **Semester - II**

### **MEC-201 to MEC-208**

#### **MEC -201 Fundamentals of E-Commerce**

##### **Objectives**

The objective of this paper is to educate the learner about e-Commerce concepts along with applications and its structure in India, so students can understand fundamental, security issues and measures for E-Commerce and its related applications.

##### **UNIT 1 Introduction to E-Commerce**

E-Commerce – Introduction, Definition, Scope, Internet commerce v/s E-Commerce, Electronic Commerce- Market – Trade Cycle, Electric Data Interchange, Forces fueling E-commerce, E-Commerce Functions, Challenges to traditional methods, E-commerce industry framework, , Types of E-commerce, Scope and limitations of e-commerce.

##### **UNIT 2 E-Commerce Architecture**

Internet and Its role in e-commerce, Internet Service Provider and Internet Access Provider, Procedure of registering Internet, Domain, establishing connectivity to Internet, Tools and services of Internet, Internet v/s online services, Procedure of opening e-mail accounts on Internet, on line payments. Web system architecture: Introduction to HTML, HTTP and HTTPS, Web page formatting with text, image, links, tables, frames and form.

##### **UNIT 3 E-Commerce Models and Payment System**

Classification of E-Commerce practices, Different models (B2B, B2C, C2C, G2B, and B2G etc) of Ecommerce and their functions, Ethical and Legal issues in EC models, Indian scenario for Taxation in ECommerce, Cross border obstructions in EC. Electronic Money and Online Payment Methods: Card Money, Virtual Money, Payment Transfer methods.

##### **UNIT 4 E-Commerce Applications**

Manufacturing & Marketing Applications, Retail & Wholesale Applications, Entertainment & Games Applications, Finance & Banking Applications, Auction & Bid Applications, Education & Publishing Applications.

##### **UNIT 5 Business Strategies for E-Commerce**

Value Chain, competitive Strategy and advantages, Business Strategy – B2B and B2C, B2B- Inter organizational transactions, EDI, Benefits, Technology, Standards, Security, on line business, B2C – Consumer transaction, e-shop Internet. Security strategies of EC: Authentication and Authorization in EC, Threats-Frauds and scams in EC, Secure customer services.

##### **Suggested Readings**

1. Computer Today - S. Bansundara
2. E-Commerce: The Cutting Edge of Business - Bajaj and Nag , Tata McGraw Hill
3. E-Commerce Concepts Models & Strategies – C.S.V.Murthy, Himalaya Publication.
4. E-Commerce – Mathew Rergnolds, Wrox publication Communication
5. Global Electronic Commerce- Theory and Case Studies J Christopher Westland, H K Clark- University Press
6. E-Commerce – an Indian perspective – P T Joseph – Prentice Hall, 2/e, 2005

## **MEC-202: BUSINESS POLICY AND STRATEGIC ANALYSIS**

### **Objectives**

The Objectives of this course is to develop a holistic perspective of enterprise, critical from the point of view of the top executives.

### **Course Contents**

- I. Nature and Scope of Strategic Management; Strategic and Corporate evolution in Indian Context, Strategic Management Process. General Management Point of View, Vision, Mission, Objectives and Policies, Strategic Intent and Vision.
- II. Environmental Analysis and Internal Analysis: Environmental Scanning, Industry Analysis Organizational Analysis, Competitive Advantage and competitive strategies, concept of core competencies, SWOT Analysis.
- III. Tools and Techniques for Strategic Analysis; Impact Matrix; The Experience Curve; BCG Matrix; GEC Model; Industry Analysis; Concept of Value Chain, Strategic Profile of a Firm.
- IV. Framework for Analyzing Competition; Competitive Advantage of a Firm, Strategy Alternative, level of Strategy.
- V. Turnaround Management, Mergers and Acquisition, Diversification and Intensification, Business Process Re-engineering, Strategy Implementation, Strategy and structure, organizational values and their impact on strategy, Strategic Management in International firm.

### **Suggested Readings**

1. *Ansoff, H Igor. Implanting Strategic Management. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1984.*
2. *Budhiraja, S B and Athreya, M B. Cases in Startegic Management New Delhi, Tata McGraw-Hill, 1996.*
3. *Christensen, C R. etc, Business Policy: Text and Cases. 6th ed., Homewood, Illinois, Richard D. Irwin, 1987.*
4. *Glueck, William F. Strategic Management and Business Policy. 3rd ed. New York, McGraw-Hill, 1988.*
5. *Hax, A C and Majluf, N S. Strategic Management. Englewood Cliffs, New jersey, Prentice Hall Inc., 1984.*
8. *Chakravorty, S K. Managerial Transformation Through Values, New Delhi, Sage, 1993.*
9. *David Fred. Strategic Management. 7th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1997.*
10. *Drucker, Peter F. The Changing World of the Executive. New York, Time Booksl 982.*



## **MEC-203: HUMAN RESOURCE MANAGEMENT**

### **Objectives**

In a complex world of industry and business, organizational efficiency is largely dependent on the contribution made by the members of the Organization. The Objectives of this course is to sensitize students to the various facets of managing people and to create an understanding of the various policies and practices of human resource management.

### **Course Contents**

- I. Concepts and Perspectives on Human Resource Management; Human Resource Management in a Changing Environment, Balance Score Card.
- II. Corporate Objectives and Human Resource Planning; Career and Succession Planning; Job Analysis and Role Description.
- III. Methods of Manpower Search; Attracting and Selecting Human Resources. Competency Mapping, Induction and Socialization.
- IV. Manpower Training and Development; Talent Management, Performance management system -KRA, KPI, Job Evaluation & Wage Determination.
- V. Employee Welfare; Industrial Relations & Trade Unions; Dispute Resolution & Grievance Management; Employee Empowerment.

### **Suggested Readings**

1. *Aswathappa, K. Human Resource and Personnel Management Tata McGraw Hill, New Delhi, 1 997*
2. *De Cenzo, D A & Robbins S P. Human Resource Management.5th ed., New York, John Wiley, 1994.*
3. *Guy, V & Mattock J. The New International Manager. London, Kogan Page, 1993.*
4. *Holloway, J. ed. Performance Measurement and Evaluation. New Delhi, Page, 1995.*
5. *Monappa, A. & Saiyadain M. Personnel Management. 2nd ed., New Delhi, Tata McGraw-Hill, 1966.*
6. *Stone, Lloyed and Leslie W.Rue, Human Resource and Personnel Management Richard D. Irwin, Illinois, 1984.*
7. *Sundar, K. & Srinivasan J. Essentials of Human Resource Management (2<sup>nd</sup> Ed.). Vijay Nicole Imprints Private Limited, Chennai.*
8. *Sundar, K. Human Resource Development. Vijay Nicole Imprints Private Limited, Chennai.*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-204: FINANCIAL MANAGEMENT**

### **Objectives**

The purpose of this course is to acquaint the students with the broad framework of financial decision making in a business unit.

### **Course Contents**

#### **Unit -I**

Financial Management: meaning, objectives, finance functions, Time Value of Money; Instruments of Financing, Cost of Different Sources of Raising Capital, Weighted Average Cost of Capital.

#### **Unit -II**

Operating and Financial Leverage, Valuation and Capital Structure, Decisions, Capital structure Theories, Optimum Capital Structure, Economic Value Added.

#### **Unit –III**

Internal Financing and Dividend Policy, Dividend Models, Leasing: concept, types and financial evaluation of Leasing.

#### **Unit -IV**

Capital Budgeting, Methods of Capital Budgeting, Analysis of Risk in Capital Budgeting, Use of Excel for Financial Decision Making.

#### **Unit -V**

Working Capital Concept, Nature and scope, Determinants of Working Capital, Instruments of Short-term Financing - Management of Working Capital, Cash, Receivable and Inventory Management.

### **Suggested Readings**

1. Archer, Stephen H. etc. *Financial Management*. New York, John Wiley, 1990.
2. Bhalla, V K. *Financial Management and Policy*. 2<sup>nd</sup> ed., New Delhi, Anmol, 1998.
3. Brealey, Richard A. and Myers Stewart C. *Principles of Corporate Finance*. 5<sup>th</sup> ed., New Delhi, McGraw Hill, 1996.
4. Hampton, John. *Financial Decision Making*. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1997.
5. Van Horne, James C. *Financial Management and Policy*. 1<sup>st</sup> ed., New Delhi, Prentice Hall of India, 1997.
6. Winger, Bernard and Mohan, Nancy. *Principles of Financial Management*. New York, Macmillan Publishing Company, 1991.

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-205: MARKETING MANAGEMENT**

### **Objectives**

The purpose of this course is to develop and understanding of the underlying concepts, strategies and issues involved in the marketing of products and services.

### **Course Contents**

1. Nature and scope of marketing, Corporate orientations towards the market place, The Marketing environment and Environment scanning, Marketing information system and Marketing research, Understanding consumer and Industrial markets.
2. Market segmentation, Targeting and positioning; Product decisions - product mix, product life cycle.
3. New product development, branding and packaging decisions, Pricing methods and strategies.
4. Promotion decisions promotion mix, advertising, sales promotion, publicity and personal selling; Channel management - selection, co-operation and conflict management, vertical marketing *Implementation and* systems, Organizing and implementing marketing in the Organization.
5. Evaluation and control of marketing efforts; New issues in marketing - Globalization, Consumerism, Green marketing, Legal issues.

### **Suggested Readings**

1. *Enis, B M. Marketing Classics: A Selection of Influential Articles. New York, McGraw Hill, 1991.*
2. *Kotler, Philip and Armstrong, G. Principles of Marketing. New Delhi, Prentice Hall of India, 1997.*
3. *Kotler, Philip. Marketing Management: Analysis, Planning, Implementation and Control. New Delhi, Prentice Hall of India, 1994.*
4. *Ramaswamy, V S and Namakumari, S. Marketing Management: Planning, Control. New Delhi, MacMillan, 1990.*
5. *Stanton, William, J. Fundamentals of Marketing. New York, McGraw Hill, 1994.*
6. *Neelamegham, S. Marketing In India: Cases and Readings. New Delhi, Vikas, 1988.*
7. *Sundar, K. Essentials of Marketing. Vijay Nicole Imprints Private Limited, Chennai.*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

# **MEC-206: PRODUCTION AND OPERATIONS MANAGEMENT**

## **Objectives**

The Course is designed to acquaint the students with decision making in: Planning, scheduling and control of Production and Operation functions in both manufacturing and services; Productivity improvement in operations through layout engineering and quality management etc.; Effective and efficient flow, replenishment and control of materials with reference to both manufacturing and services organisations.

## **Course Contents**

1. Nature and Scope of Production and Operations Management Decisions, Types of Manufacturing Systems, Productivity, Challenges in Operations Management, Operations Strategy.
2. Production Planning and Control: An Overview Facilities Location, Location Planning, Facilities Layout (a) Capacity Planning, Aggregate Planning (b) Master Production Scheduling (c) MRP. Role of information technology in operations management.
3. Work Study, Methods Study, Work Measurement, Performance Rating and computation of Standard Time, Maintenance Management, Industrial Safety, Supply Chain Management, PERT/CPM. Importance of digitalization in continuous production system.
4. Material Management: An Overview; Material Handling Equipment, Assembly Line Balancing, Line Balancing Problems, Line Balancing Approaches, Operation Decision, MRP, Purchasing and Store Management, Inventory Control and Budgeting. Artificial Intelligence in operations management.
5. Concept of Quality and Quality Assurance, Statistical Process Control (Acceptance Samplings), ISO, 9000, Total Quality Management (TQM), Six Sigma, Lean Management.

## **Suggested Readings**

1. Adam, E E & Ebert, R J. *Production and Operations Management*. 6th ed., New Delhi, Prentice Hall of India, 1995.
2. Amrine Harold T. etc. *Manufacturing Organisation and Management*. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1993.
3. Buffa, E S. *Modern Production Management*. New York, John Wiley, 1987.
4. Chary, S N. *Production and Operations Management*. New Delhi, Tata McGraw Hill, 1989.
5. Dobler, Donald W and Lee, Lamar. *Purchasing and Materials Management*. New York, McGraw Hill, 1984.
6. Dilworth, James B. *Operations Management: Design, Planning and Control for Manufacturing & Services*. Singapore, McGraw Hill, 1992.
7. Moore, FG and Hendrick, T E. *Productionl Operations Management*. Homewood, Illinois, Richard D. Irwin, 1992.

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

## **MEC-207: RESEARCH METHODOLOGY**

### **Objectives**

To equip the students with the basic understanding of the research methodology and to provide an insight into the application of modern analytical tools and techniques for the purpose of management decision making.

### **Course Contents**

- I. Nature and Scope of Research Methodology; Problem Formulation and Statement of Research Objectives, Structure of Research. Research Process; Research Designs - Exploratory, Descriptive and Experimental Research Design.
- II. Sampling Design, Sampling Methods, Methods of Data Collection – Qualitative and Quantitative Methods, Review of Literature, Instrument Designing- Questionnaire Format and Question Composition, Individual Question Content, Question Order, Form and Layout, Pilot Testing of the Questionnaire.
- III. Selecting an Appropriate Statistical Technique, Hypothesis testing, Type I, Type II error. Parametric and non-parametric tests. Parametric: t-test, f-test, Z-test. Non - parametric tests: Run test, KW test, Mann Whitney U Test.
- IV. Multivariate Analysis: Introductory Framework, Use of SPSS and other statistical Software Packages (elementary idea only) Practical Example of Case Study Method.
- V. Data Interpretation and Report Writing: Introduction, Data interpretation, Research Report, Modus Operandi of Writing a Market Research Report, Structure and Layout of the Report, Revising and Finalizing the Research Report, Responsibilities of a Market Research Report Writer, Presentation of the Report.

### **Suggested Readings**

1. *Andrews, F.M. and S.B. Withey Social Indicators of Well Being, Plenum Press, NY, 1976*
2. *Bennet, Roger: Management Research, I LO, 1 983*
3. *Fowler, Floyd J. Jr., Survey Methods, 2<sup>nd</sup> ed., Sage Pub., 1993*
4. *Fox, J.A. and P.E. Tracy: Randomized Response: A Method of Sensitive Surveys, Sage Pub., 1986*
5. *Gupta, S.P. Statistical Methods, 30<sup>th</sup> ed., Sultan Chand, New Delhi, 2001*
6. *Golden, Biddle, Koren and Karen D. Locke: Composing Qualitative Research, Sage Pub., 1997*
7. *Salkind, Neil J. Exploring Research, 3<sup>rd</sup> ed., Prentice-Hall, NJ, 1997*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.

# **MEC-208: INTERNATIONAL BUSINESS ENVIRONMENT AND MANAGEMENT**

## **Objectives**

The primary Objectives of this course is to acquaint the students to emerging global trends in business environment.

## **Course Contents**

- I. International Business: An overview - Types of International Business; The External Environment; The Economic and Political Environment, The Human Cultural Environment; Influence on Trade and Investment Patterns; Recent World Trade and Foreign Investment Trends; Theories and Institutions.
- II. Trade and Investment - Government Influence on Trade Investment; Determination of Trading Partner's Independence, Interdependence and Dependence; World Financial Environment; Cross-national Cooperation and Agreements; Tariff and Non-Tariff Barriers, WTO, Regional Blocks; International production; Internationalization of Service Firms.
- III. World Financial Environment: Foreign Exchange Market Mechanism; Determinants of Exchange Rates; Euro-currency Market; Global Strategic Management: International Marketing. Operation Management in International Firms.
- IV. An Overview of Licensing; Joint Ventures Technology and Global Competition; Globalization and Human Resource Development; Globalization with Social Responsibility; Balance of Payments Accounts and Macroeconomic Management.
- V. World Economic Growth and the Environment; *Country Evaluation and Selection*; *International Business Diplomacy*: Negotiating an International Business, Multilateral Settlements; Consortium Approaches.

## **Suggested Readings**

1. Alworth, Julian S. *The Finance, Investment and Taxation Decisions of Multinationals*. London, Basil Blackwell, 1988.
2. Bhalla, V K and S. Shivaramu. *International Business Environment and Business*. New Delhi, Anmol, 1995.
3. Bhalla, V K. *International Economy: Liberalisation Process*. New Delhi, Anmol, 1993.
4. Daniel, John D and Radebangh, Lee H *International Business*. 5th ed., New York, Addison Wesley, 1989.
5. Eiteman, D K and Stopnehill, Al. *Multinational Business Finance*. New York, Addison Wesley, 1986.
6. Johnston, R B. *The Economics of the Euromarket: History, Theory and Practice*. New York, Macmillan, 1983.
7. Parks, Yoon and Zwick, Jack. *International Banking in Theory and Practice*. New York, Addison-Wesley, 1985.

The list of cases and specific references including recent articles and reports will be announced in the class at the time of launching of the course.

## **SECOND YEAR**

### **Semester-III**

MEC-301	E-Commerce Progressions
MEC-302	Digital Marketing
MEC-303	E-advertising
MEC-304	Managing E Channels
MEC-305	Logistics and Supply Chain Management
MEC -306	Marketing Research
MEC-311	Entrepreneurship Development
MEC-312	Summer Training Project Report

### **Semester-IV**

MEC-401	E-Business Philosophy
MEC-402	E-Business Technologies and Trends
MEC-403	Warehouse Management and Data Mining (WMDN)
MEC -404	Business Analytics
MEC-411	Major Research Project

## **Specialization: Electronic Business**

MEC-301	E-Commerce Progression
MEC-302	Digital Marketing
MEC-303	E-Advertising
MEC-304	Managing E Channels
MEC-305	Logistics and Supply Chain Management
MEC-306	Marketing Research
MEC 307	Principles of E-Commerce
MEC-308	Information and Network Security
MEC-309	Internet Programming for e-Business/ e- Commerce
MEC-310	Programming Lab
MEC-311	Entrepreneurship Development
MEC-312	Summer Training Project Report
MEC-401	E-Business Philosophy
MEC-402	E- Business Technologies and trends
MEC-403	Warehouse Management and Data Mining (WMDN)
MEC- 404	Business Analytics
MEC-405	Database Management System
MEC-406	Knowledge Management System
<b>MEC-411</b>	<b>Major Research Project</b>



## **MEC-301 E-Commerce Progression**

### **Objectives**

The objective of this paper is to educate the learner about e-Commerce technology and tools with some security aspects in their uses.

### **Course Contents:**

#### **UNIT 1 Transaction Security**

Functionality of Network Models, Protocols for OSI and TCP Models, Firewalls & N/W security, Type of firewall, security policies, Emerging firewall management issue, Transaction security, Types of online transactions, Requirement for online transactions.

#### **UNIT 2 Encryption and Transaction Security**

Secret –key Encryption, Public key Encryption, Secret key Cryptography, Encryption and Decryption, Authorization and Authentication, Encryption algorithms, Decryption Implementation & management issues, secure socket layers (SSL), Security & online web based banking.

#### **UNIT 3 Security of e-commerce**

Internet security, Setting up Internet security, Maintaining secure information, Encryption Issues, Digital signature and other security measures, Firewall. Security Breaches and Cyber Law.

#### **UNIT 4 Payment Systems**

Electronic Data Interchange, Digital cash, properties, Electronic check & benefits, Online credit card system, Types of credit card payments, Secure electronic transactions (SET), Other emerging financial instruments, Debit card & Point of sale (POS), Debit card & E-benefit transfer, Smart cards, UPI

#### **UNIT 5 - E-Payment**

Overview of E-payment system, transactions through Internet, electronic fund transfer, intelligent agents, Requirements of e-payment systems, functioning of debit and credit cards, Pre and Post payment services. Different e-Transactions: E-com & Banking, E-com & Retailing, E-com & Online Publishing, e-com and gaming.

### **Suggested Readings**

- E-Commerce – S. Jaiswal
- E-Commerce Strategy, Technology & Applications – David Whitely, TMGH
- Electronic Payment Systems for E-Commerce - Michael A. Peirce, Hitesh Tewari, O'Mahony Donal.

## **MEC-302 Digital Marketing**

### **Objectives**

The objective of this paper is to create awareness about Digital Marketing and educate the learner about use of electronics in marketing management.

### **Course Contents:**

#### **Unit 1 Introduction to Digital Marketing and SEO**

The Significance of Digital Marketing, Digital Media, Digital v/s Traditional Marketing, Digital Marketing Trends and Platforms, Digital Marketing and Search Engine, Search Engine Optimization (SEO) concepts, Search Engine Architecture, Internal Measures for SEO, Do and Don't for Web Content, Link Building, Introduction to Digital Marketing Tools.

#### **Unit 2 Networks of Digital Marketing**

Introduction to Ad-Word, Display Networks, Advertising on Display Networks, Image Advertising, Mobile Advertising, Video Advertising, YouTube Advertising, Keyword Research Methodology, Analysis and Tools for Digital Marketing Networks, Link Building Methodology and Strategies, Online Offline Integration

#### **Unit 3 Search Engine Marketing**

Benefits of SEM, Google Ad-Words V/S Microsoft Ad-Center, Types of Campaign, Ad-Group and keywords setup, Direct Campaign V/S Branding Campaign, Campaign Setup, Understanding Ad-Words Bidding, Ad-Formats and Guidelines, Campaigns, Ad-groups and keywords Dashboard

#### **Unit 4 Email and Mobile Marketing**

Importance of Email Marketing, Popular Email Marketing Software, Email Marketing Campaign, Newsletters in Email Marketing, Effective strategies for Email Marketing, Email Marketing Tools, Triggered Email Campaign, Mobile Marketing: Mobile Ad-Campaign, Mobile Ad-Formats, Mobile Website Configuration. Video Marketing using YouTube: Optimization of Videos, Tips and Tricks for promotion, YT Analytics, Monetizing YT Channel

#### **Unit 5 Social Media Marketing**

Introduction to Social Media Marketing, Benefits of SMM, Social Media Strategy, Social Media Metrics in SEO, Face-book Marketing: setup, options, elements and applications; Twitter Marketing: #hash tags and its uses, analytics and promotions; Google+ Marketing: Benefits in SEO, Groups; LinkedIn Marketing: Strategy, Connection and Recommendations

### **Suggested Readings**

- *Damian Ryan and Calvin Jones, Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, 2nd Edition, and ISBN: 9780749453893.*
- *Vinayak Patukale, Digital Marketing, Kindle Edition*

## **MEC-303 E-advertising**

### **Objectives**

The objective of this paper is to create awareness about E-advertising and educate the learner about use of internet in advertising.

### **Course Content:**

Unit 1.

Advertising & Electronic Media: Introduction, functions, concepts & Evolution of Advertising. Types of advertising, advertising appeals, Copywriting. Comparison between Traditional & Modern Advertising media, National & Global Advertising scene.

Unit 2.

E-Advertising channels: Radio channels: Community Satellite Radio, Misc. radio networks. Audio-Visual Interface System for Advertising. Television Channels: Evolution of TV channels. Doordarshan to satellite, Cable & STB channels, National & Regional channels, Internet & Area networks.

Unit 3.

Social Media advertising: Role of Social Media in business, Social networking sites advertising, pinterest advertising, YouTube advertising, Mobile App advertising, Socio-economic effects of social media advertising.

Unit 4.

Advertising planning & scheduling. Media planning, Factors influencing the choice of media, Cost Planning, Cost & Impact Analysis, Media Scheduling, Advertising Agencies & their role.

Unit 5.

Measuring advertising efficiency, Evaluation of advertising effectiveness, Methods of measuring advertising effectiveness, Pre-testing & Post-testing.

### **Suggested Readings:**

*Shamci A.N., Electronic Media, Anmol Publication*

*Arvind Singhal and Everett M. Rogers, India's Communication Revolution- Sage Pub. 2007*

*Further books can be referred at time of study.*

## **MEC-304 Managing E Channels**

### **Course Contents:**

**Unit I- Nature & Scope E Channels,** Various models of E Channels, Understanding Local channel options, Partnering Marketplace Sales, Partnering Search Engines, Partnering With New Startups, integrating Web-stores.

**Unit-II E-business Website/ E-store Design:** Choose A Domain Name, Designing Low Cost Website, The Best Web Hosting Service, Search Engine Friendly Contents , Publishing Your Web-store Online, Affiliate Networks & Sales Improvement, Selling Informations, Payment Gateway Safe & Best, Joining The Wheels With The "Shopping" Cart, Web-store's Inventory Management, Logistics & Order Fulfillment.

**Unit-III E-Behavior and Managing Web Traffic:** Understanding The Customers Mindset, Search Engine Optimization & Ranking, Get Your Retail Shop Online, Officially Launching Your Ebusiness , Online Vs Offline Customers: Difference & Similarities, Converting Traffic Into Sales ,Online Branding & Reputation Management, Digital Marketing Strategy.

**Unit IV- Managing Experience of E shopping:** Giving The Perfect Shopping Experience, Making Your Customers A Celebrity, Stay Local Market Global, Delivery Model & Backend Automation, Online Business Web Security, Types Of Web Security & Threats, Information Security Planning, Hacked! How To Defend & Backup, Site & Business Safety, Internet Data Security, Digital Marketing & Boosting Sales.

**Unit V- Advanced E-Commerce Business Strategies:** Getting Into Global Markets, Acquiring New Customers Fastly, Adding New Products Expanding Globally, Retaining An Old Customer, Transform A Small Site Into A Million Dollar Business, Hiring Ecommerce Experts & Mentors, Listing Your Company In Stock Markets

### **Suggested Readings:**

- *Managing Business in Multi-Channel World: Success Factor of E-Business,* Timo Sarrien, Makku Tinnila, Anne Tseng- Idea Group Publishing.
- *Management of Electronic and Digital Media,* Alan B. Albarran, Cengage Learning. ISBN-13: 9781111344375.

# **MEC-305 Logistics and Supply Chain Management**

## **Objectives**

The objective of this paper is to create awareness about Supply Chain and Logistics Management and educate the learner about use of electronic devices in SCM.

## **Course Contents**

### **Unit 1 Concept of Supply Chain Management**

Basic concepts & philosophy of Supply Chain Management (SCM), Essential features, Functions and Contribution of Supply Chain Management, Infrastructure flows (Cash, Value and information), key issues in SCM, Creating value, Supply Chain Effectiveness and Indian Infrastructure, Framework for Supply Chain Solution, Supply Chain Relationships (SRM).

### **Unit 2 Concept of Logistic Management**

Concept of Logistics, Objectives of logistics, Types of logistics, Concept of Logistics Management, Evolution of Logistics, Role of Logistics in an Economy, Difference between Logistics and Supply Chain Management, Logistics and Competitive Advantage, Logistics Mix, Logistics in Organized Retail in India

### **Unit 3 Integrated Logistics**

Concept of Integrated Logistics, Inventory flow, Information flow, Operational Objectives of Integrated Logistics, Barriers to Integration, Organization structure, Measurement system, Inventory ownership, Information technology, Knowledge transfer capability, Logistical Performance Cycle, Manufacturing support performance cycle, Procurement performance cycle

### **Unit 4 Recent issues in SCM**

Role of computer/ IT in supply chain management, CRM Vs SCM, Benchmarking concept, features and implementation, Outsourcing –basic concepts, value addition in SCM, Concept of Demand Chain Management

### **Unit 5 Logistic Information System and Ecommerce**

Concept of Logistics Information System (LIS), Importance of LIS, Principles of designing LIS, Logistics Information Architecture, Application of Information Technology in Logistics and Supply Chain Management, Requirements of LIS in E-Commerce, E-Logistics Structure and Operation, Logistic Resource Management (LRM)

## **Suggested Readings:**

- *G. Raghuram (IIMA), Logics and supply chain management, Macmillan, 2000*
- *Emiko Bonafield, Harnessing value in supply chain, Johnwiley - Singapore, 1999.*
- *B.S. Sahay, Macmillan – Supply Chain Management, 2000, (Pearson Education, 2004)*

## **MEC -306 Marketing Research**

### **Objective**

This paper aims to develop skills in the students to conduct the market research and to help them to understand the procedure thoroughly and apply it in practical world.

### **Course Content:**

**Unit-1 Marketing Research Dynamics- Introduction,** Value and Cost of Information  
*Data Collection Sources and Methods:* Introduction, Meaning and Nature of Data, Methods of Data collection, Tools and techniques for Data collection, Interview Method, Instrument Designing- Introduction.

**Unit-2 Measurement and Scaling Techniques-**Introduction, Importance of Measurement and Scaling in Marketing Research, Scales of Measurement: Fundamental Properties, Primary Scales of Measurement, Attitude Measurement Scales, Types of Comparative Scales, Non – Comparative scale, Selecting an Appropriate Scale, Scale Evaluation, Motivational Research Techniques.

**Unit-3 Data Processing and Preliminary Data Analysis:** Introduction, Survey Field Work and Data Collection, Nature and Scope of Data Preparation, Editing, Coding, Data Entry, Data Cleaning, Preliminary Data Analysis, Assessing for Normality and Outliers

**Unit-4 Data Analysis:** Introduction, Descriptive Statistics, Univariate Analysis, Bivariate Analysis, Analysis of Variance, Multivariate Analysis; Discriminant Analysis, Factor Analysis, Conjoint Analysis, Multidimensional Scaling and Clustering Methods.

**Unit-5 Applications of Marketing Research I:** Introduction, Consumer Market Research, Business-to-Business Market Research, Product Research, Pricing Research, Motivational Research, Distribution Research, Advertising Research, Media research, Sales Analysis and Forecasting, Data Mining.

*Recent Trends in Marketing Research:* Introduction, Marketing Information System and Research, Online Marketing Research, Recent, Research in Lifestyle Retail, Marketing Research and Social Marketing, Trends in Services Marketing Research and Branding Research.

### **Suggested Readings:**

- *Marketing Research by Naresh K. Malhotra*
- *Research Methodology by C.R. Kothari*
- *Marketing Research Tools and techniques by Nigel Bradley*

## **MEC-307 Principles of E-Commerce**

### **Objective:**

The objective of this paper is to educate the learner about e-Commerce concepts along with applications and its structure in India.

To inform the students about the fundamentals, security issues & measures, philosophy and database management.

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### **Course Contents:**

#### **UNIT 1 Introduction to e-Commerce**

E-Commerce – Introduction, Definition, Scope, Electronic Commerce- Market – Trade Cycle, Electric Data Interchange, Internet Commerce, Forces fueling E-commerce, E-Commerce Functions, Challenges to traditional methods, E-commerce industry framework, Information superhighway, Types of E-commerce, Scope and limitations of e-commerce.

#### **UNIT 2 Fundamental of e-Business**

Road map for moving a business to E-business, E-Com Vs E-Business, E-business communities, Model for E-business, E-business Trident, E-SCM, E-CRM, ERP, Business Process Reengineering.

#### **UNIT 3 E-Business Analysis and Design**

E-business and structural transformation, Integrated Solutions, Integrated Enterprise Applications, Wireless Applications, constructing Electronic Business Design, Steps, Analysis, Diagnosis, Reversing Value Chain, Evaluation and Selection.

#### **UNIT 4 Business Strategies for E-Commerce**

Value Chain, competitive Strategy and advantages, Business Strategy – B2B and B2C, B2B-Inter organizational transactions, EDI, Benefits, Technology, Standards, Security, on line business, B2C – Consumer transaction, e-shop Internet.

#### **UNIT 5 Structure of E-Commerce**

Internet and Its role in e-commerce, Internet Service Provider and Internet Access Provider, Procedure of registering Internet, Domain, establishing connectivity to Internet, Tools and services of Internet, Internet v/s online services, Procedure of opening e-mail accounts on Internet, on line payments.

### **Suggested Readings**

- Computer Today - S. Bansundara
- E-Commerce: The Cutting Edge of Business - Bajaj and Nag , Tata McGraw Hill
- E-Commerce Concepts Models & Strategies – C.S.V.Murthy, Himalaya Publication.
- E-Commerce – Mathew Rergnolds, Wrox publication Communication
- Global Electronic Commerce- Theory and Case Studies J Christopher Westland, H K Clark- University Press
- E-Commerce – an Indian perspective – P T Joseph – Prentice Hall, 2/e, 2005

## **MEC-308 Information and Network Security**

### **Objectives**

The objective of this paper is to educate the learner about Information Technology Trends in e- Commerce and Various aspect of Network Security.

Course Contents

### **UNIT 1 Introduction to Information Security**

Attributes of Information Security, Security Strategies & Processes, Importance of Security Policies and Audits, Threats & Vulnerabilities: Unauthorized Access, Impersonation, Denial of Service, Malicious Software, Trap Doors, Logic Bomb, Trojan Horses, Viruses, Worms.

### **Unit 2 Identification and Authentication**

Definitions, Types of authentication, Password Authentication, Password Vulnerabilities & Attacks, Brute Force & Dictionary Attacks, Password Policy & Discipline, Biometrics: Types of Biometric Techniques, False Rejection, False Acceptance, Cross Over Error Rates.

### **Unit 3 Web Security and Application Security**

Web Servers & Browsers, Server Security features, Server privileges, SSL & SET, Firewalls, Firewall Characteristics, Types of Firewalls, Application Level Gateway or Proxy

### **Unit 4 Network Security**

Overview of IPV4, OSI Model, Maximum Transfer Unit, IP, TCP, UDP, ICMP, ARP, RARP and DNS, Network Attacks, Denial of Service Attacks, Virtual Private Network Technology, Security Policy Design: Definition, Security Policy Document, Risk Management,

### **Unit 5 Security Framework**

Security Policy and Framework, Components of an enterprise Network, Elements of Security Architecture, Design and Implementation: Physical Security Controls, Logical Security Controls, Audit Trails, Security Awareness Training, Incident Handling

### **Suggested Readings**

- Technical Resource and Course Web Site for Cryptography and Network Security, 3rd Edition, by William Stallings.
- Cryptography and Network Security by Atul Kahate, TMG 2003



## **MEC-309 Internet Programming for e-Business/e-Commerce**

### **Objectives**

The objective of this paper is to educate the learner about Programming and Its application as Internet Applications.

### **Course Contents**

#### **Unit 1 Programming Structure**

Programming concepts, Programming languages Evolution, Object Oriented Language, Java and its Characteristics, Byte Code, Concept of Client and Server side programming, Scripting Language, Markup Language..

#### **Unit 2 HTML Building Blocks**

HTML: Concepts and Tag Notions, Design, Site Design, Linking HTML Documents, Adding Images, audio and video, SCRIPTS: Java Scripts and VB Scripts. Theory of DHTML and CGI, XML, PHP, CSS

#### **Unit 3 DOT NET Technologies**

Net Class framework, VB.Net and its relevance, ASP.Net and its appliance, Building .Net Components, ADO.Net, ASP.Net Case Study

#### **Unit 4 JAVA Technologies**

Java as OO Language, Data Type and Classes, Packages and Interface, String Handling, Applets, Standard Java Packages

#### **Unit 5 PHP Technologies**

Variables, Function, and Forms, \$\_GET, \$\_POST, \$\_REQUEST, File Handling, File Uploads, Sessions, Cookies , Database Connectivity , File Handling, File Uploads, Sending emails.

### **Suggested Readings**

- HTML – 4 for World Wide Web by Castro Addison Wesley (Singapore) Pvt. Ltd., New Delhi
- Principles of Web Designing Joel Sklar, Web Warrior Series Available with Vikas Publishing House Pvt. Ltd., New Delhi
- HTML 4.0 Unleashed by Rick Dranell; Tech Media Publications
- Introducing .NET Wrox Press Limited
- Java How to Program, 7/e by Deitel and Deitel

## **MEC-310 Programming Lab**

### **Objectives**

It provides the participants an opportunity to study the hands-on implementation of a web page and web application in commercial environment.

### **Course Contents:**

#### Unit 1

Using of various tags for designing Static Web Pages, Building simple page, Formatting pages,

Use of images, Links, Lists, Frames, Tables, Forms. DHTML, Java Script and VBScript Implementation in Web Page.

Configuring IIS Web Server: Installing IIS, Publishing a web-site, creating virtual directory.

Configuring Apache Server: Installing Apache, Configuring MY SQL and PHP

Development of web site and web application With ASP/ ASP.Net

### **Suggested Readings**

- Teach Yourself HTML 4.0 with XML, DHTML and Java Script by Stephanie, Cottrell, Bryant; IDG Books India Pvt. Ltd., New Delhi
- Active Server Pages (ASP) by Keith Morneau Jill Batistick Web Warrior Series, Vikas Publishing House Pvt. Ltd., New Delhi
- ASP Unleashed Tech Media Publication
- Web enabled commercial application development using HTML, DHTML, Javascript by Ivan Bayross, BPB

## **MEC-311 Entrepreneurship Development**

**Unit 1<sup>st</sup>:** Entrepreneurship: Concept, Types of Entrepreneurship, knowledge and skills requirement; Characteristic of successful entrepreneurs; role of entrepreneurship in economic development; entrepreneurship process; factors impacting emergence of entrepreneurship, Entrepreneur v/s Intrapreneur, Entrepreneur Vs. Entrepreneurship, Entrepreneur Vs. Manager,

**Unit 2<sup>nd</sup>:** Entrepreneurial Environment, Rural Entrepreneurship, Theories of Entrepreneurship, And Legal Forms of Enterprises, Electronic Startups, Entrepreneurship Development Program: Needs and Objectives of EDPs, Phases of EDPs, Evaluation of EDPs

**Unit 3<sup>rd</sup>** Feasibility & Prefeasibility study, Fundamental of a good feasibility plan & Components of feasibility – market feasibility, technical/operational feasibility, financial feasibility; drawing business plan; preparing project report; presenting business plan to investors.

**Unit 4<sup>th</sup>** Institutional Assistance, Role of Government in promoting Entrepreneurship, MSME policy in India, Agencies for Policy Formulation and Implementation: District Industries Centers (DIC), Small Industries Service Institute (SISI), Entrepreneurship Development Institute of India (EDII), National Institute of Entrepreneurship & Small Business Development (NIESBUD), National Entrepreneurship Development Board (NEDB), Role of SIDBI.

**Unit 5<sup>th</sup>** Small Skills Unit, Dynamics of small business environment - Causes for small business failure - Success factors for small business, Women Entrepreneurship: Meaning, Characteristic features, Problems of Women Entrepreneurship in India, Developing Women Entrepreneurship in India, Incentive subsidiary. Recent emerging concepts like Atmanirbhar Bharat, Make in India.

### **Suggested Readings**

1. S.S.KHANKA “Entrepreneurial Development” S.Chand & Co. Ltd. Ram Nagar New Delhi, 1999.
2. Hisrich R D and Peters M P, “Entrepreneurship” 5th Edition Tata McGraw-Hill, 2002.
3. E. Gordon & K. Natarajan Entrepreneurship Development Himalaya 2008\
4. Charantimath, Poornima, Entrepreneurship Development and Small Business Enterprises, Pearson Education, New Delhi.
5. Hisrich, Robert D., Michael Peters and Dean Shepherded, Entrepreneurship, Tata McGraw Hill, ND
6. Sundar, K. *Entrepreneurship Development*. Vijay Nicole Imprints Private Limited, Chennai.

## **MEC-312 Summer Training Project Report**

At the end of second semester, all students will have to undergo summer training of 6 weeks with an organization by taking up a project study. The conditions of successfully completing the programme shall not be deemed to have been satisfied unless a student undergoes summer training under the supervision of the department in organizations as approved by the Department / Faculty from time to time. Each student will be required to submit a project report to the Department / Faculty for the work undertaken during this period within five weeks of the commencement of the third semester for the purpose of evaluation in the third semester.

# Semester – IV

## **MEC-411 Major Research Project**

Major Research Project study shall commence in the **beginning of fourth semester** and will have two papers weight. It may be Industry oriented internship cum project or departmentally allocated research project.

# **MEC-401 E-Business Philosophy**

## **Objectives**

The objective of this paper is to educate the learner about e-Business philosophy and various components of it.

## **Course Contents:**

### **UNIT 1 - Introduction to E-Business**

Evolution of E-Business, Principles of E –business, E-business models, E-Business Strategies, Legal Aspects of E-Business, Steps to Successful E-Business Implementation. Case and scenario discussion for e- business.

### **UNIT 2 - E-Business Issues & Internet Marketing**

Organizational issues, implementation issues, marketing issues, Internet marketing, different stages of Internet marketing, Critical success factors for Internet marketing, Managing Search Engine, Building online Trust.

### **UNIT 3 E-business frameworks**

Channel Enhancement, Global Markets, E-Selling, E –Buying, E –Procurement, Convergence strategies. E-Business Design: Overview, Steps in e-business design, reversing the value chain, Knowledge building, E-market models, Service and Operation Excellence, Coalitions.

### **UNIT 4 Issues and Challenges in E-Business**

Consumer Protection, Cyber Crimes and Cyber Laws, E-cash advantages and disadvantages, Electronic data interchange, Data mining and E-Marketing. Data Analytics and Applications.

### **UNIT 5 E-Business Operations and Processes**

Competitiveness, Profitability and productivity, Operations success- Competing through effective operations, Processes-Products and services to match customers needs, Interactive models and software windows for daily operations decisions- Enterprise software- readability and enhanced functionality of SAP R/3 information

## **Suggested Readings**

- *E-Business Fundamental by Bansal SK*
- *E-Business by Gupta VK*
- *E-Business and E-Commerce Management 2e by Dave Chaffey*
- *The E-Business Book: A Step-by-Step Guide to E-Commerce and Beyond by Davle M SMith*

## **MEC-402 E-Business Technologies and Trends**

### **Objectives**

The objective of this paper is to educate the learner about Trends and technologies of e-Business in various business sectors like marketing, governance, trading etc.

### **Course Contents:**

#### **UNIT 1 E- Marketing**

Marketplace v/s Market space, Impact of e-commerce on market, Marketing issues in e-marketing, Direct marketing, One-to-one marketing.

#### **UNIT 2 E-Trading**

Areas of e-financing, E-Trading, Trading v/s e-trading, Importance and advantages of e-trading, Operational aspects of e-trading, E-Trading in India

#### **Unit 3 E-Ticketing:**

Online booking systems, online booking procedure-Railways & Airlines, Tourist and Travel Industry, Hotels and Entertainment Industry

#### **UNIT 4 E-Banking**

Concept, Traditional v/s E-banking, Indian E-Banking Environment, Production and Distribution in E-Banking, Key Issues in E-Banking, Future of E-Banking.

#### **UNIT 5 E-Governance**

Overview of E-Governance, E-Governance Strategies, E-Governance in Rajasthan/India, Government Portals and Enterprises, E-Governance in Global Scenario.

### **Suggested Readings**

- *E-government: From Vision To Implementation: A Practical Guide With Case Studies* by Subhash Bhatnagar
- *E-Governance in India: Issues and Cases* by JayShree Bose, ICFAI Publication
- *E-Banking in India: Issues and Cases* by JayShree Bose, ICFAI Publication

# **MEC-403 Warehouse Management and Data Mining (WMDM)**

## **Objectives**

The objective of this paper is to create awareness about warehouse Management and educate the learner about use of data mining in warehouse management.

## **Course Contents**

### **Unit 1 Concept of Warehouse**

Introduction, Objectives, Warehouse Structure, Meaning of a Warehouse, Need for warehousing management, Evolution of warehousing, Role of a warehouse manager, Functions of Warehouses, Types of Warehouses, Warehousing Cost, Warehousing Strategies.

### **Unit 2 Warehousing in Business Functions**

Supply Chain Impact on Stores and Warehousing, Retail Logistics, Retail transportation, Challenges in retail warehousing, Issues in retail logistics, managing retail shrinkage Significance of Warehousing in Logistics, Warehousing Management Systems (WMS).

### **Unit 3 Warehouse Operations and Applications**

Warehouse Operations, Receiving inventory, Picking inventory, Locating inventory, Organizing inventory, Dispatching inventory, Equipment Used for a Warehouse, Warehouse information, Importance of Warehouse Information, Decision Making Using Warehouse Information, ICT Applications in a Warehouse.

### **Unit 4 Technology Aids in Warehouse Management**

Retailing and Warehousing, Warehousing and Supply Chain, Role of government in warehousing, Bar Code Scanners, Wireless LAN, Mobile Computers, Radio Frequency Identification (RFID), Retail product tracking in warehouse using RFID

### **Unit 5 Data mining and Data Warehouse**

Introduction, Data Mining Functionalities, Classification of data mining systems – Major issues in data mining, Data warehouse and OLAP technology for data mining, What is a data warehouse – A Multi dimensional model, ,Data Warehouse Architecture, Data Warehouse Implementation.

## **Suggested Readings**

- *Michael J A Berry, Gordon S Linoff, Data Mining Techniques, Wiley Publishing inc, Second Edition, 2004. ISBN: 81-265-0517-6.*
- *Alex Berson, Stephen J.Smith, Data warehousing , data mining & OLAP, , Tata McGraw Hill Publications,2004.*



## MEC -404 BUSINESS ANALYTICS

**Objective:** This course aims to develop overall analytical skills of the students and to help them to apply analytical techniques in business decision making.

### Course Contents:

**Unit I- Introduction to Business Analytics:** Applications, Objectives, Business Analytics and Competitive Advantage, Different types of Data, Big data, Data Mining Process, Data Mining and tools(Hadoop), Introduction to programming Language (R, Python)

**Unit II- Descriptive Analytics:** Introduction, Visualising and exploring data, Descriptive statistics, Sampling and Estimation, Introduction to Probability Distribution, Tools Application, Correlation and other statistical Tools.

**Unit III- Predictive Analytics:** Principles of Forecasting, Predictive Modelling: Logic driven and Data driven Models, Time series, Types of Forecasting, Forecasting Methods and their Characteristics, Trend, Seasonality, Cyclist, Hold winner Forecasting method.

**Unit IV- Prescriptive Analytics:** Business rule algorithms, nonlinear optimization, Machine learning and Artificial Intelligence, Computational Modelling.

**Unit V- Ethics and Analytics:** Data collection and Protection laws, Ethical Use of Analytics, Analytics and Privacy Principles.

### Suggested Readings:

- *JAMES, E.R (2017) BUSINESS ANALYTICS (2 EDITION). PEARSON EDUCATION LIMITED, UK*
- *UNIT – I, II, III, IV*
- *Albright, S.C. & Wayne L. Winston, W.L. (2015) Business Analytics: Data Analysis and Decision Making (5 edition), Cengage Learning Limited*
- *Unit – I, II, III IV*
- *Collmann, J. & Matei, S.A(2016) Ethical Reasoning in Big Data: An Exploratory Analysis (Computational Social Sciences) 1st ed. Springer International Publishing Switzerland*
- *Unit V*
- *Mitchell, T.M. (2017) Machine Learning. First edition. McGraw Hill Education*

## **MEC-405 Database Management System**

### **Objectives**

The objective of this paper is to educate the learner about Database Management System and the application of systems designed to manage the data resources of organizations.

### **Course Contents:**

#### **Unit 1 Introduction to DBMS**

Data Processing Concepts, Data Structures, File Processing and Access Methods, Difference between FPS and DBMS, Characteristics of DBMS. Functions of Transaction Processes and their Communications Interface with Database Management Systems. Taxonomy of Data Management Systems, Various Data Base Management Models.

#### **Unit 2 Classification and Types of DBMS**

Relation Database Management System, Distributed Data Base Systems, On-line Data Bases system, Object Oriented Data Bases. Managerial Issues Related to Data Base Management. Evaluation of Commercially Available Software Systems with managerial Emphasis on Tradeoffs Among Cost, Capacity, and Responsiveness.

#### **Unit 3 Structure of DBMS**

Schema, Sub-Schema, Relation, Tuples, Attributes, Normalization: 1NF, 2NF, 3NF, BCNF and Other Normalization Forms. Schema Design and Development. Keys as Attributes: Primary Key, Secondary Key, Candidate Key, Referential Key and Unique Key. ER-Diagram: Design and implementation.

#### **Unit 4 Analysis of DBMS**

Distributed Data Processing Systems and a Need for Database Environment for such a System Physical Database Structures. Study of a Relational Database Management Systems for Successful implementation of Distributed Systems, Re-organization Problems, Implementation and Maintenance Issues, Database Administration

#### **Unit 5 Structured Query Languages**

Evolution of Structured Query Language, Evaluation Criteria of 4GL, Data Definition Language(DDL)- commands and application, Data Manipulation Language (DML) – commands and applications, Performance Analysis, Recovery issues.

### **Suggested Readings**

- Coad, Peter and Edward, Yourdon, Object-Oriented Analysis. 2nd ed., Englewood Cliff, New Jersey, Yourdon Press, 99.
- Kroenke, David M. Data base Processing: Fundamentals, Design, Implementation. 4th ed., New York, McMillan, 1992.
- Database System Concepts by Henry Korth, Abraham Silberschatz and S. Sudarshan, TMG

## **MEC-406 Knowledge Management System (KMS)**

### **Objectives**

The objective of this paper is to create awareness about Knowledge Management and educate the learner about use of electronic gazettes for KMS.

### **Course Contents:**

#### **Unit 1 Basic Concepts of Knowledge Management**

Definition of KM, Objectives of KM, Activities of KM, Effective Presentation & Language of KM, Scientific Management v/s Knowledge Management.

#### **Unit 2 KM – Systems Dimension**

Introduction –Technical perspectives on KM - Internet – Intranet - & World Wide Web - Virtual Communications & relationships. - Multimedia Technology – Software Technology-Building Technical infrastructure of KM.

#### **Unit 3 KM – The People Dimension**

People management policies & practices in the knowledge environment. - Motivating & rewarding workers. - Recruitment, retention & planning, etc in a knowledge environment. - Impact of KM on managers. - Team work in a knowledge environment.

#### **Unit 4 KM – Organizational Dimension**

Cultural Aspects, learning effects, process model- New organizational forms in the knowledge economy. Identifying knowledge resources – knowledge audits –ideas of holistic KMS. Management & knowledge economy.

#### **Unit 5 KM – Tools and Techniques**

DIKW Model and Its application in knowledge management, Knowledge processing, Information Systems in KM, Tools to access and extract knowledge - WEB, BLOG , TAG, WIKI. Techniques for knowledge management – GDSS (Group Decision Support System), CBRS (Case Based Reasoning System), Search Engine and Artificial Neural networks.

### **Suggested Readings**

- A practical guide to knowledge Management- Brelade & Harman a. Published by Vinod Vasishtha for Viva Books Pvt. Ltd' 4737/23 Ansari Road, Daryaganj, New Delhi 110012.
- Management Information System : Gordon B. Davis, Margrethe H. Olson a. TATA McGRAW-HILL Publishing Co. Ltd. New Delhi.
- Management Information System : Waman S Jawadekar a. TATA McGRAW-HILL Publishing Co. Ltd. New Delhi.
- Information Technology: V. Rajaraman, a. Prentice Hall of India Pvt Ltd.,New Delhi- 110 001
- Human Resource Management: S. Seetharaman, B. Venkatsawara a. Prasad, - SCITECH PUBLICATIONS: No.4. Anna Street, Chitlapakkam, Chennai- 600 064.