

E-COMMERCE (TIT-501)

UNIT I

Introduction

What is E-Commerce, Forces behind E-Commerce Industry Framework, Brief history of E-Commerce, Inter Organizational E-Commerce Intra Organizational E-Commerce, and Consumer to Business Electronic Commerce, Architectural framework

Network Infrastructure for E-Commerce

Network Infrastructure for E-Commerce, Market forces behind I Way, Component of I way Access Equipment, Global Information Distribution Network, Broad band Telecommunication.

UNIT-II

Mobile Commerce

Introduction to Mobile Commerce, Mobile Computing Application, Wireless Application Protocols, WAP Technology, Mobile Information Devices, Web Security
Introduction to Web security, Firewalls & Transaction Security, Client Server Network, Emerging Client Server Security Threats, firewalls & Network Security.

UNIT-III

Encryption

World Wide Web & Security, Encryption, Transaction security, Secret Key Encryption, Public Key Encryption, Virtual Private Network (VPM), Implementation Management Issues.

UNIT - IV

Electronic Payments

Overview of Electronics payments, Digital Token based Electronics payment System, Smart Cards, Credit Card I Debit Card based EPS, Emerging financial Instruments, Home Banking, Online Banking.

UNIT-V

Net Commerce

EDA, EDI Application in Business, Legal requirement in E -Commerce, Introduction to supply Chain Management, CRM, issues in Customer Relationship Management.

References:

1. Greenstein and Feinman, "E-Commerce", TMH
2. Ravi Kalakota, Andrew Whinston, "Frontiers of Electronic Commerce", Addison Wesley
3. Denieal Amor, " The E-Business Revolution", Addison Wesley
4. Diwan, Sharma, "E-Commerce" Excel
5. Bajaj & Nag, "E-Commerce: The Cutting Edge of Business", TMH

INFORMATION SYSTEMS (TIT-502)

Unit-I

Foundation of Information Systems: Introduction to information system in business, fundamentals of information systems, solving business problems with information system, concept of balanced MIS, effectiveness & efficiency criteria.

Unit-II

System Analysis Design function, CASE Tools, Project Feasibility, Information Requirement & Decision Analysis, Preparing System Proposal, Input / Output design, Procedures & control design, System development, Testing & Quality assurance.

Unit-III

Implementation, Operation, Evaluation and Maintenance, Structured System Methodologies, Automated systems development, Hardware / Software selection, Systems function management. Business application of Information Technology: Internet & Electronic commerce, internet, extranet & enterprise solutions, information system for business operations, information system for managerial decision support, information system for strategic advantage.

Unit-IV

Managing Information Technology: Enterprise and global management, security & ethical challenges planning & implementing changes.

Unit-V

Advanced Concepts In Information Systems: Enterprise resource planning, Supply Chain Management, C.R.M., Procurement Management.

References :

1. O Brian, "Introduction to Information System", McGraw Hill
2. O Brain, "Management Information System", TMH
3. Ashok Kumar Sharma, "Analysis Design & Implementation of Information Systems: A Transition to Objects",
4. Vikas, Alter, "Information System: A management perspectives Addison Wesley
5. Arore & Bhatia, "Information System for Managers", Excel Bansal. "Information System Analysis and Design", New Age Murdick, "Information System for Modem Management", PHI.

INTRODUCTION TO WEB TECHNOLOGY (TIT-503)

UNIT I

Introduction and Web Development Strategies

History of Web, Protocols governing Web, Creating Websites for individual and Corporate World, Cyber Laws

Web Applications, Writing Web Projects, Identification of Objects, Target Users, Web Team, Planning and Process Development.

UNIT II

HTML, XML and Scripting

List, Tables, Images, Forms, Frames, CSS

Document type definition, XML schemes, Object Models, Presenting XML, Using XML Processors: DOM and SAX

Introduction to Java Script, Object in Java Script, Dynamic HTML with Java Script.

UNIT III

Java Beans and Web Servers

Introduction to Java Beans, Advantage, Properties, BDK, Introduction to EJB, Java Beans API

Introduction to Servlets, Lifecycle, JSDK, Servlet API, Servlet Packages: HTTP package, Working with Http request and response, Security Issues.

UNIT IV

JSP

Introduction to JSP, JSP processing, JSP Application Design, Tomcat Server, Implicit JSP objects, Conditional Processing, Declaring variables and methods, Error Handling and Debugging, Sharing data between JSP pages- Sharing Session and Application Data.

UNIT V

Database Connectivity

Database Programming using JDBC, Studying Javax.sql.*package, accessing a database from a JSP page, Application-specific Database Action, Developing Java Beans in a JSP page, introduction to Struts framework.

REFERENCE:

1. Burdman, "Collaborative Web Development" Addison Wesley.
2. Chris Bates, "Web Programming Building Internet Applications", 2nd Edition, WILEY, Dreamtech
3. Joel Sklar, "Principal of web Design" Vikash and Thomas Learning
4. Horstmann, "CoreJava", Addison Wesley.
5. Herbert Schildt, "The Complete Reference:Java", TMH.
6. Hans Bergsten, "Java Server Pages", SPD O'Reilly

DESIGN & ANALYSIS OF ALGORITHMS (TCS-503)

Unit -I

Introduction: Algorithms, analysis of algorithms, Growth of Functions, Master's Theorem, Designing of Algorithms. Sorting and order Statistics: Heap sort, Quick sort, Sorting in Linear time, Medians and Order Statistics.

Unit -II

Advanced Data Structure: Red-Black Trees, Augmenting Data Structure. B-Trees, Binomial Heaps, Fibonacci Heaps, Data Structure for Disjoint Sets.

Unit -III

Advanced Design and Analysis Techniques: Dynamic Programming, Greedy Algorithms, Amortized Analysis, Back Tracking.

Unit -IV

Graph Algorithms: Elementary Graphs Algorithms, Minimum Spanning Trees, Single-source Shortest Paths, All-Pairs Shortest Paths, Maximum Flow, Traveling Salesman Problem.

Unit -V

Selected Topics: Randomized Algorithms, String Matching, NP Completeness, Approximation Algorithms.

References:

1. Coreman, Rivest, Lisserson, : "Algorithms", PHI.
2. Basse, "Computer Algorithms: Introduction to Design & Analysis", Addison Wesley.
3. Horowitz & Sahani, "Fundamental of Computer Algorithm", Galgotia.

INDUSTRIAL ECONOMICS AND PRINCIPLES OF MANAGEMENT (THU 501)

Industrial Economics:

Unit –1.Introduction: Nature and significance of Economics. Meaning of Science, Engineering and Technology and their relationship with economic development.

Unit –2. Basic Concept: The concept of demand and supply. Elasticity of Demand and Supply. Indifference Curve Analysis, Price Effect, Income Effect and Substitution Effect.

Unit –3. Money and Banking: Functions of Money, Value of Money, Inflation and measures to control it. Brief idea of functions of banking system, viz., Commercial and central banking, Business fluctuations.

Management:

Unit –4. Introduction: Definition, Nature and Significance of Management,. Evaluation of Management thought, Contributions of Max Weber, Taylor and Fayol.

Unit –5. Human Behaviour: Factors of Individual Behaviour, Perception, Learning and Personality Development, Interpersonal Relationship and Group Behaviour.

References:

1. Dewett, K.K. / Modern Economic Theory/S.Chand & Co.
2. Luthers Fred/ Organizational Behaviour.
3. Prasad L.M./ Principles of Management.
4. A.W. Stonier & D.C. Horgne / A TextBook of Economic Theory/ Oxford Publishing House Pvt. Ltd.

OPERATING SYSTEMS (TCS-601)

Unit -I

Introduction: [02] Operating System and Function, Evolution of Operating System, Batch,

Interactive, Time Sharing and Real Time System, System Protection. Operating System Structure: [04] , ' System Components, System Structure, Operating System Services.

Unit - II

Concurrent Processes: [06] Process Concept, Principle of Concurrency, Producer / Consumer Problem, Critical Section, Problem, Semaphores, Classical Problems in Concurrency, Inter Processes Communication, Process Generation, Process Scheduling.

Unit - III

CPU Scheduling: [05] Scheduling Concept, Performance Criteria Scheduling Algorithm, Evolution, Multiprocessor Scheduling. Deadlock: [05] System Model, Deadlock Characterization, Prevention, Avoidance and Detection, Recovery from Deadlock, Combined Approach.

Unit - IV

Memory Management: [06] Basic Machine, Resident Monitor, Multiprogramming with Fixed Partition, Multiprogramming With Variable Partition, Multiple Base Register, Paging, Segmentation, Paged Segmentation, Virtual Memory Concept, Demand Paging, Performance, Paged Replaced Algorithm, Allocation of Frames, Thrashing, Cache Memory Organization, Impact on Performance.

Unit - V

I/O Management & Disk Scheduling: [04] I/O Devices and The Organization of I/O Function, I/O Buffering, Disk I/O, Operating System Design Issues. File System: [04] File Concept, File Organization and Access Mechanism, File Directories, File Sharing, Implementation Issues.

Suggested Books And References:

1. Milenekovie, "Operating System Concept", McGraw Hill.
2. Petersons, "Operating Systems", Addison Wesley.
3. Dietal, "An Introduction to Operating System", Addison Wesley.
4. Tannenbaum, "Operating System Design and Implementation", PHI.
5. Gary Nutt, "Operating System, A Modern Perspective", Addison Wesley.
6. W. Stalling, "Operating System", Maxwell Macmillan
7. Silveschatza, Peterson J, "Operating System Concepts", Willey.
8. Crowley, "Operating System", TMH.

COMPUTER NETWORKS (TCS-602)

Unit -I

Introduction Concepts: Goals and Applications of Networks, Network structure and architecture, The OSI reference model, services, Network Topology Design - Delay Analysis, Back Bone Design, Local Access Network Design, Physical Layer Transmission Media, Switching methods, ISDN, Terminal Handling.

Unit-II

Medium Access sub layer: Medium Access sub layer - Channel Allocations, LAN protocols - ALOHA protocols - Overview of IEEE standards - FDDI. Data Link Layer - Elementary Data Link Protocols, Sliding Window protocols, Error Handling.

Unit - III

Network Layer: Network Layer - Point - to Point Networks, routing, Congestion control
Internetworking -TCP / IP, IP packet, IP address, IPv6.

Unit - IV

Transport Layer: Transport Layer - Design issues, connection management, session Layer-Design issues, remote procedure call. Presentation Layer-Design issues, Data compression techniques, cryptography - TCP - Window Management.

Unit-V

Application Layer: Application Layer: File Transfer, Access and Management, Electronic mail, Virtual Terminals, Other application. Example Networks - Internet and Public Networks.

References :

1. Forouzen, "Data Communication and Networking", TMH
2. A.S. Tanenbaum, Computer Networks, 3rd Edition, Prentice Hall India, 1997.
3. S. Keshav, An Engineering Approach on computer Networking, Addison Wesley, 1997
4. W. Stallings, Data and Computer Communication, Macmillan Press, 1989. 3. 4.

SOFTWARE PROJECT MANAGEMENT (TIT-601)

UNIT -I:

Overview of Software Project Planning
Software Project, Categorization of software Project, Introduction to Stepwise Project Planning, Project Scope, Infrastructure, Resource Allocation etc, Project Plan Execution.

UNIT – II :

Project Evaluation
Strategy assessment, Technical Assessment, Cost Benefit Analysis, Cash flow forecasting, Risk Evaluation, Selection of Technologies, Rapid application Development, Prototyping Example.

Unit III:

Software Effort Estimation & Activity Play Over & under estimation problem, basis for software estimation, Estimation by analogy, COCOMO, Parameter Model function, point analysis, Project schedule, Planning Model, Project Time management, Activity duration estimation.

Unit IV

Risk management, Identification, Analysis and abatement of risk, Nature of resources, critical, county cost, schedule, Monetary & control, Cost Monitoring, Priority by monetary, Managing Control , Contract Management, Human Resource Management.

Unit V

Software quality Assurance, Software quality in project planning, Software quality definition, ISO 9126 standards, Product quality management, SEICMM model

ERP SYSTEM (TIT-602)

UNIT: I

ERP Overview, Benefit, Business Process Reengineering, Data ware Housing, Data Mining, LAP, Supply chain Management.

UNIT -II

ERP -A Manufacturing Perspective, ERP Module, ERP Market, ERP implementation life cycle, Options of various paradigms, Identification of suitable platforms, Role of SDLC/SSAD, Object oriented architecture.

UNIT:- III

ERP Implementation, Hidden costs, Vendors, Consultant Employees, Human Resource

UNIT :IV

ERP & E-Commerce, Future Directives- in ERP, ERP and Internet, Critical Factors guiding selection and evaluation, Strategies for successful implementation, Impediments and initiatives to achieve success, Critical success and failure factors, Integrating ERP into organizational culture.

UNIT-V

Using ERP tool: either SAP or ORACLE format to case study.

ORGANIZATIONAL BEHAVIOR (THU-602)

Introduction to organizations and individuals:

What is an organization, components of organization, nature and variety of organizations (in terms of objectives, structure etc.), models of analyzing organizational phenomena, organizational and business variables, organizations in the Indian context, institutions and structures, basic roles in an organization, etc. perceptions, attitudes, motives (achievement, power and affiliation), commitment, values, creativity, and other personality factors, profile of a manager and a entrepreneur.

Interpersonal and group processes:

Interpersonal trust, understanding the other person from his/her point of view, interpersonal communication, listening, feedback, counseling, transactional analysis, self-fulfilling prophecy, etc., leadership, motivating people, working as a member of a team, team functioning, team decision-making, team conflict resolution, team problem solving.

Organizational structure and integrating interpersonal and group dynamics elements of structure, functions of structures, determinants of structures, dysfunctionalities of structures, structure - technology?environment-people relationships, principles underlying design of organizations, organizational politics, issues of power and authority, organizational communications, organizational change, integrating cases (s). Case method and lectures should be supplemented

with a variety of other methodologies such as feedback on questionnaires and tests, role plays, and behavior simulation exercise.

References :

1. Jit S Chandan "Organizational Behavior", Vikas
2. M.N. Mishra :Organization Behavior", Vikas
3. Arnold, John, Robertson, Ivan 1. and Cooper, Cary, I.," Work Psychology :understanding human behavior in the workplace", Macmillan India Ltd., Delhi. 1996. 4.
4. Dwivedi, RS., Human relations and organizational behavior: a global perspective, Macmillan India Ltd., Delhi, .1995.
5. Hersey and Blanchard (6th ed.). "Management of organizational behavior L utilising human resources", Prentice Hall of India Pv1. Ltd., New Delhi, 1996.
6. Robbins (4th ed.), "Essentials of organizational behavior", Prentice Hall of India Pv1. Ltd., New Delhi, 1995.
7. Luthans Fred., "Organizational Behavior", McGraw Hill, 1998.