### SREE VIDYANIKETHAN ENGINEERING COLLEGE (Autonomous)

**COURSE STRUCTURE (2010-2011)**  
IV B.Tech. I Semester

#### INFORMATION TECHNOLOGY

<table>
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<tr>
<th>Code</th>
<th>Subject</th>
<th>Periods per week</th>
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<th>Scheme of Examination Max. Marks</th>
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**Elective-I**

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**Elective-II**

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**TOTAL**

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SVEC10 - Information Technology
## INFORMATION TECHNOLOGY

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UNIT-I: INTRODUCTION TO HTML
Basic HTML, the document body, text, hyperlinks, lists, tables, images, frames, forms, Cascading Style Sheets: Introduction, simple examples, defining your own styles, properties and values in styles, formatting blocks of information, layers.

UNIT-II: JAVA SCRIPT
Basics, variables, string manipulation, arrays, functions, objects in java script, introduction to DHTML.

UNIT-III: EXTENSIBLE MARKUP LANGUAGE (XML)
XML basics, Document Type Definition, XML Schema, Presenting XML, Introduction to DOM and SAX parsers.

UNIT-IV: SERVLET PROGRAMMING
Introduction, servlet implementation, servlet configuration, servlet exceptions, servlet lifecycle, Requests and Responses: ServletRequest, ServletResponse, HttpServletRequest, HttpServletResponse interfaces, cookies, session creation and tracking using HttpSession interface.

UNIT-V: DATABASE PROGRAMMING WITH JDBC
Database drivers, the java.sql package: connection management, database access, data types, database metadata, exceptions and warnings, loading a database driver and opening connections, establishing a connection, creating and executing sql statements querying the database, prepared statements, mapping sql types to java, transaction support, save points.

UNIT-VI: INTRODUCTION TO JSP
Introducing JSP, JSP directives, scripting elements, standard actions, implicit objects, scope and JSP pages as XML documents, introduction to MVC architecture.

UNIT-VII: JSP TAG EXTENSIONS
Introduction to javabean, advantages of javabean, introspection, getter and setter methods, introduction to JSP tag extensions, a simple tag, anatomy of a tag extension, writing tag extensions.
UNIT-VIII: JSP APPLICATIONS WITH TAG LIBRARIES

Benefits of using custom tag libraries, introducing the JSP Standard Tag Library (JSPTL), getting started with the JSPTL, integrating the JSPTL into your JSP page, the JSPTL tags.

TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: MOBILE COMPUTING
Introduction, History, architecture, devices and applications, limitations.
GSM: Mobile services, System architecture, Radio interface, Protocols, Localization and calling, Handover, Security, and New data services.

UNIT-II: MEDIUM ACCESS CONTROL
Motivation for a specialized MAC (Hidden and exposed terminals, Near and far terminals), SDMA, FDMA, TDMA, CDMA.

UNIT-III: WIRELESS LAN
Infrared vs. radio transmission, Infrastructure and ad hoc networks, IEEE 802.11.
HiperLAN: Protocol architecture, physical layer, Channel access control sub-layer, MAC sub-layer, Information bases and networking.
Bluetooth: User scenarios, physical layer, MAC layer, networking, security, link management.

UNIT-IV: MOBILE NETWORK AND TRANSPORT LAYERS
Mobile IP (Goals, assumptions, entities and terminology, IP packet delivery, agent advertisement and discovery, registration, tunneling and encapsulation, optimizations), Dynamic Host Configuration Protocol (DHCP).
Mobile Transport Layer: Traditional TCP, Indirect TCP, Snooping TCP, Mobile TCP, Fast retransmit/ fast recovery, Transmission/time-out freezing, Selective retransmission, Transaction oriented TCP.

UNIT-V: DATABASE ISSUES
Hoarding techniques, caching invalidation mechanisms, client server computing with adaptation, power-aware and context-aware computing, transactional models, query processing, recovery, and quality of service issues.

UNIT-VI: DATA DISSEMATION
push-based mechanisms, pull-based mechanisms, hybrid mechanisms, selective tuning (indexing) techniques.
UNIT-VII: MOBILE AD HOC NETWORKS (MANETS)
Overview, Properties of a MANET, spectrum of MANET applications, routing and various routing algorithms, security in MANETs

UNIT-VIII: PROTOCOLS AND TOOLS
Wireless Application Protocol-WAP. (Introduction, protocol architecture, and treatment of protocols of all layers) and J2ME.

TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION TO MULTIMEDIA
Definition of multimedia, multimedia and hypermedia, World Wide Web, multimedia software tools, graphics and image data representations: graphics/image data types, file formats, color models in images, color models in video.

UNIT-II: FUNDAMENTAL CONCEPTS IN AUDIO AND VIDEO
Definition of sound, Digitization, Nyquist theorem, signal to noise ratio, signal to quantization-noise ratio, MIDI, types of video signals, analog video, digital video.

UNIT-III: ACTION SCRIPT-I
Action Script 2.0 Features, Data types and type checking: static typing, type syntax, compatible types, casting, Action Script 2.0 type checking, Classes: defining classes, constructor functions, properties, methods.

UNIT-IV: ACTION SCRIPT-II
Inheritance: A primer on inheritance, subclasses as subtypes, overriding methods and properties, constructor functions in subclasses, polymorphism and dynamic binding, Interfaces: introduction, syntax and use, Packages: syntax, defining packages, package access and classpath, Exceptions: the exception handling cycle, exception bubbling, finally block, nested exceptions, limitations.

UNIT-V: ACTION SCRIPT-III
Authoring an Action Script 2.0 class, An OOP Application Development, Using Components with Action Script 2.0, MovieClip Subclasses.

UNIT-VI: MULTIMEDIA DATA COMPRESSION-I
Lossless compression algorithms: introduction, basics of information theory, run length coding, variable length coding, dictionary based coding, arithmetic coding, lossless image compression, Lossy compression algorithms: quantization, transform coding, wavelet based coding.
UNIT-VII: MULTIMEDIA DATA COMPRESSION-II


UNIT-VIII: MULTIMEDIA NETWORK COMMUNICATIONS AND APPLICATIONS

Quality of Multimedia Data Transmission, Multimedia over IP, Multimedia over ATM Networks, Transport of MPEG-4, Media-on-Demand (MoD).

TEXT BOOKS:


REFERENCE BOOKS:


3. Fred Halsall, Multimedia Communications, Pearson, 2004

UNIT-I: INTRODUCTION

UNIT-II: ENCRYPTION PRINCIPLES
Conventional encryption algorithms: Feistal structure, DES algorithm, S-Boxes, Triple DES, Advanced Data Encryption Standard (AES), Cipher block modes of operation, location of encryption devices, key distribution Approaches of Message Authentication, Secure Hash Functions and HMAC.

UNIT-III: CRYPTOGRAPHY AND APPLICATIONS
Public key cryptography principles, public key cryptography algorithms, Digital signatures, RSA, Elliptic Algorithms, Digital Certificates, Certificate Authority and key management, Kerberos, X.509 Directory Authentication Service.

UNIT-IV: ELECTRONIC MAIL SECURITY
Email privacy: PGP operations, Radix-64 Conversion, Key Management for PGP, PGP Trust Model, Multipurpose Internet Mail Extension (MIME), Secure MIME (S-MIME).

UNIT-V: IP SECURITY ARCHITECTURE AND SERVICES

UNIT-VI: WEB SECURITY
Web Security Considerations, Secure Socket Layer (SSL) and Transport Layer Security (TLS), Secure Electronic Transaction (SET).
UNIT-VII: NETWORK MANAGEMENT SECURITY

Basic concepts of SNMP, SNMPv1 Community facility and SNMPv3.


Malicious Software: Viruses and related threats, Virus Counter Measures, Distributed Denial of Service Attacks.

UNIT-VIII: FIREWALLS


TEXT BOOKS:


REFERENCE BOOKS:

UNIT-I: INTRODUCTION TO PARALLEL COMPUTING
Motivating parallelism, Scope of Parallel Computing, Organization and contents of the text.

UNIT-II: PRINCIPLES OF PARALLEL ALGORITHM DESIGN
Decomposition techniques, Characteristics of tasks and Interactions, Mapping techniques for load balancing, Parallel Algorithm Models.

UNIT-III: ANALYTICAL MODELING OF PARALLEL PROGRAMS
Source of Overhead in Parallel programs, Performance Metrics for Parallel systems, Scalability of Parallel systems, Asymptotic Analysis of Parallel Programs.

UNIT-IV: DENSE MATRIX ALGORITHMS

UNIT-V: GRAPH ALGORITHMS
Definitions and Representation, Prim's and Dijkstra's Algorithms, Algorithms for Sparse graphs.

UNIT-VI: SEARCH ALGORITHMS FOR DISCRETE OPTIMIZATION PROBLEMS
Definitions and Examples, Sequential Search Algorithms, Parallel Depth- First Search, Parallel Best-first Search, Speedup Anomalies in Parallel Algorithms.

UNIT-VII: DYNAMIC PROGRAMMING
Overview of Dynamic programming, Serial Monadic DP formulations, Non serial Monadic DP formulations, Serial polyadic DP formulations, Non Serial polyadic DP formulations.
UNIT-VIII: FAST FOURIER TRANSFORM


TEXT BOOK:


REFERENCE BOOK:

UNIT-I: INTRODUCTION
Electronic Commerce Framework, anatomy of E-Commerce applications, E-Commerce Consumer applications, E-Commerce organization applications.

UNIT-II: CONSUMER ORIENTED ELECTRONIC COMMERCE
Consumer Oriented Applications, Mercantile Process models from the consumer's Perspective and from the Merchant's Perspective.

UNIT-III: ELECTRONIC PAYMENT SYSTEMS
Types of Electronic Payment Systems, Digital Token-Based, Smart Cards, Credit Cards, Risks in Electronic Payment systems.

UNIT-IV: INTER ORGANIZATIONAL COMMERCE
EDI, EDI Implementation, MIME and Value added networks.

UNIT-V: INTRA ORGANIZATIONAL COMMERCE

UNIT-VI: CORPORATE DIGITAL LIBRARY

UNIT-VII: CONSUMER SEARCH AND RESOURCE DISCOVERY
Information search and Retrieval, Commerce Catalogues, Information Filtering.

UNIT-VIII: MULTIMEDIA AND DIGITAL VIDEO
Key multimedia concepts, Digital Video and electronic Commerce, Desktop video processing, Desktop video conferencing, broadband telecommunication.
TEXT BOOK:


REFERENCE BOOKS:

UNIT-I: INTRODUCTION
Distributed Data Processing, Distributed Database System, Promises of DDBSs, Problem areas.
Distributed DBMS Architecture: DBMS Standardization, Architectural Models for Distributed DBMSs, Distributed DMBS Architecture.

UNIT-II: DISTRIBUTED DATABASE DESIGN
Query Processing and Query Decomposition: Query Processing Objectives, Characterization of query processors, layers of query processing, Query decomposition, Localization of distributed data.

UNIT-III: OPTIMIZATION OF DISTRIBUTED QUERIES
Query optimization, centralized query optimization, Distributed query optimization algorithms.
Introduction to Transaction Management: Definition of a Transaction, Properties of Transactions, Types of Transactions.

UNIT-IV: DISTRIBUTED CONCURRENCY CONTROL

UNIT-V: DATABASE SECURITY

UNIT-VI: XML AND INTERNET DATABASES

UNIT-VII: GEOGRAPHIC INFORMATION SYSTEMS
UNIT-VIII: ADVANCED DATABASES AND APPLICATIONS

Object Databases, Temporal Databases, Multimedia Databases, Spatial Databases, Mobile Databases, Data mining Concepts and Overview of Data warehousing and OLAP.

TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: SOFTWARE EFFORTS ESTIMATION TECHNIQUES
The waterfall model, conventional software Management performance.

UNIT-II: IMPROVING SOFTWARE ECONOMICS
Reducing Software product size, improving software processes, improving team effectiveness, improving automation, Achieving required quality, peer inspections, The principles of conventional software Engineering, principles of modern software management, transitioning to an iterative process.

UNIT-III: LIFE CYCLE PHASES
Engineering and production stages, inception, Elaboration, construction, transition phases.
Artifacts of the process: The artifact sets, Management artifacts, Engineering artifacts, programmatic artifacts.

UNIT-IV: MODEL BASED SOFTWARE ARCHITECTURES
A Management perspective and technical perspective.
Workflows of the process: Software process workflows, Iteration workflows,

UNIT-V: CHECKPOINTS OF THE PROCESS
Major mile stones, Minor Milestones, Periodic status assessments.
Iterative Process Planning: Work breakdown structures, planning guidelines, cost and schedule estimating, Iteration planning process, Pragmatic planning.

UNIT-VI: PROJECT ORGANIZATIONS AND RESPONSIBILITIES
UNIT-VII: PROJECT CONTROL AND PROCESS INSTRUMENTATION


UNIT-VIII: NEXT GENERATION SOFTWARE ECONOMICS

Modern Project Profiles, Next generation Software economics, modern process transitions.

Case studies: The command Center Processing and Display system-Replacement (CCPDS-R), Process Improvement and Mapping to the CMM.

TEXT BOOK:


REFERENCE BOOKS:

UNIT-I: INTRODUCTION TO ERP


UNIT-II: BUSINESS MODELING FOR ERP


UNIT-III: THE DEVELOPMENT OF ERP


UNIT-IV: PROCESS MODELING, PROCESS IMPROVEMENTS


UNIT-V: ERP IMPLEMENTATION LIFECYCLE


UNIT-VI: FUTURE DIRECTIONS IN ERP

UNIT-VII: ERP PACKAGES

UNIT-VIII: CASE STUDIES
SAP R/3 at Kapp, Germany - PeopleSoft at Alcone Marketing Group- SAP R/3 at Mercedes-Benz - Oracle at Cisco-System - PeopleSoft at Morrison Express Corporation Ltd. - Oracle at Amwest Surety Insurance Company, Bann at Phonix Contractors A/S.

TEXT BOOKS:


REFERENCE BOOKS:

UNIT-I: INTRODUCTION TO BIOINFORMATICS
Internet basics, Scope of bioinformatics, elementary commands and protocols, ftp, telnet, http, primer on information theory, introduction to perl and bioperl.

UNIT-II: INTRODUCTION TO HOMOLOGY
Introduction to homology with special mention to Charles Darwin, Sir Richard Owen, Willie Henning, Alfred Russel Wallace.

UNIT-III: SPECIAL TOPICS IN BIOINFORMATICS
DNA mapping and sequencing, map alignment, large scale sequencing methods - shotgun and Sanger method. Linkage analysis - Map marker and Darwin.

UNIT-IV: SEQUENCE ALIGNMENT AND DYNAMIC PROGRAMMING
Heuristic alignment algorithms, global sequence alignments- needleman-Wunsch algorithm, local sequence alignments- smith-waterman algorithm, amino acid substitution matrices- PAM and BLOSUM.

UNIT-V: PRIMARY DATABASE AND THEIR USE
Introduction to biological databases - organization and management, searching and retrieval of information from the World Wide Web, Structure databases - PDB (Protein Data Bank), Molecular Modeling Databases (MMDB), primary databases- NCBI, EMBL, DDBJ.

UNIT-VI: SECONDARY DATABASES
Introduction to secondary databases- organization and management of databases Swiss-Prot, PIR, KEGG.

UNIT-VII: BIOCHEMICAL DATABASES
Introduction to biochemical databases-organization and Management of databases. KEGG, ExPASy, BRENDAB, WIT.

UNIT-VIII: EVOLUTIONARY TREES AND PHYLOGENY
Multiple sequence alignment and phylogenetic analysis.
TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION TO EMBEDDED SYSTEMS

Embedded Systems, Processor Embedded into a system, Embedded Hardware units and devices in a system, Embedded software in a system, examples of embedded systems, embedded system-on-chip(soc) and use VLSI circuit design technology, Complex Systems Design and processors, design process and design Examples, classification of embedded systems, skills required for an embedded system designer.

UNIT-II: 8051 AND ADVANCED PROCESSOR ARCHITECTURES

8051 architecture, real world interfacing, introduction to advanced architectures, processor and memory organization, instruction level parallelism, performance metrics, memory types, memory-maps and addresses, processor selection, memory selection, IO types and examples, serial communication devices, parallel device ports, wireless devices, timer and counting devices, Networked Embedded systems, internet enabled systems, wireless and mobile system protocols.

UNIT-III: DEVICE DRIVERS AND INTERRUPT SERVICE MECHANISM

Programmed- I/O Busy wait approach without interrupt service mechanism, ISR Concept, Interrupt sources, Interrupt servicing Mechanism, Multiple Interrupts, context and the periods for context switching, Interrupt latency and deadline, classification of processors interrupt service mechanism from context saving angle, Direct Memory Access, device driver programming.

UNIT-IV: PROGRAMMING CONCEPTS AND PROGRAM MODELING CONCEPTS

Software programming in ALP and high level language 'C', C program elements-header and source files and preprocessor directives, macros and functions, data types, data structures, modifiers, statements, loops and pointers. Program models, DFG Models, State machine programming models for event-controlled program flow, modeling of multi processor systems, UML Modelling.
UNIT-V: INTER PROCESS COMMUNICATION

Multiple Processes in an application, Multiple Threads in an application, tasks, Task states, Task and data, clear cut distinction between functions, ISRS and tasks, concept of semaphores, Shared data, Inter Process Communication, Signal Function, Semaphore Functions, Message queue functions, Mail Box Functions, Pipe functions, Socket Functions, RPC functions.

UNIT-VI: REAL TIME OPERATING SYSTEMS

OS services, process management, Timer functions, Event Functions, memory management, Device, file and IO Subsystems Management, Interrupt routines in RTOS Environment and handling of interrupt source calls, Basic design using RTOS, RTOS scheduling models, interrupt latency and response of the tasks as performance metrics, OS security issues RTOS Programming: Micro/OS-II, VxWorks, Windows CE, OSEK and RTLinux.

UNIT-VII: DESIGN EXAMPLES AND CASE STUDIES OF PROGRAM MODELING AND PROGRAMMING WITH RTOS

Case studies: Automatic chocolate vending machine, Communication between orchestra robots, Embedded system for smart card, Mobile phone software for key Inputs.

UNIT-VIII: EMBEDDED SOFTWARE DEVELOPMENT, TESTING, SIMULATION AND DEBUGGING

Host and target machines, linking and locating software, getting embedded software into Target system, testing on host machines and simulators.

TEXT BOOK:


REFERENCE BOOKS:

IV B.Tech. I Semester

10BT70402: DIGITAL IMAGE PROCESSING (ELECTIVE - II)

UNIT-I: DIGITAL IMAGE FUNDAMENTALS
Image sensing and acquisition, Image sampling and quantization, some basic relationships between pixels. Mathematical tools used in digital image processing - array Vs matrix operations, linear Vs non linear operations, Arithmetic operations, Set and Logical operations, Spatial operations, vector and matrix operations, Probabilistic methods.

UNIT-II: IMAGE TRANSFORMS
2D-DFT and properties, Walsh Transform, Hadamard Transform, Discrete Cosine Transform, Haar-Transform, Slant Transform, Hotelling Transform.

UNIT-III: IMAGE ENHANCEMENT IN THE SPATIAL DOMAIN
Basic Intensity transformations functions, Histogram processing, Fundamentals of Spatial Filtering, Smoothing spatial filters, Sharpening spatial filters, Combining spatial Enhancement methods.

UNIT-IV: IMAGE ENHANCEMENT IN FREQUENCY DOMAIN
Basics of filtering in frequency domain, Correspondence between filtering in the spatial and frequency domains, Image smoothing using frequency domain filters, Image sharpening using frequency domain filters, Homomorphic filtering.

UNIT-V: IMAGE RESTORATION
Noise models, Restoration in the presence of Noise only-spatial filtering - mean, order- statistic and adaptive filters, Estimating the degradation function, Inverse filtering, Weiner filtering, Constrained least squares filtering.

UNIT-VI: IMAGE SEGMENTATION
Point, line and edge Detection, Thresholding, Region based Segmentation, The use of motion in Segmentation.
UNIT-VII: IMAGE COMPRESSION

Need for Image Compression, Classification of redundancy in Images, Image Compression models, Classification of image compression schemes, Run length coding, Arithmetic coding, Block truncation coding, Dictionary based compression, Transform based compression, Image compression standards.

UNIT-VIII: COLOR IMAGE PROCESSING

Color models, Pseudo color image processing, Color transformations, Smoothing and Sharpening, Image segmentation based on color.

TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION AND THE TAXONOMY OF BUGS

UNIT-II: FLOW GRAPHS AND PATH TESTING

UNIT-III: TRANSACTION-FLOW TESTING AND DATA-FLOW TESTING

UNIT-IV: DOMAIN TESTING
Domains and Paths, Nice and Ugly Domains, Domain Testing, Domains and Interfaces Testing, Domains and Testability.

UNIT-V: PATHS, PATH PRODUCTS AND REGULAR EXPRESSIONS

UNIT-VI: LOGIC BASED TESTING
Motivational Overview, Decision Tables, Path Expressions Again, KV Charts, Specifications.

UNIT-VII: STATES, STATE GRAPHS AND TRANSITION TESTING
State Graphs, Good State Graphs and Bad, State Testing, Testability Tips.
UNIT-VIII: AN OVERVIEW OF SOFTWARE TESTING TOOLS


TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION TO CLOUD COMPUTING

UNIT-II: CLOUD COMPUTING ARCHITECTURE

UNIT-III: INTRODUCTION TO VIRTUALIZATION
History of virtualization, objectives of virtualization, benefits of virtualized technology, the virtual service desk, virtualizability, related forms of computing, virtualization processes.

UNIT-IV: VIRTUALIZATION TECHNOLOGIES
VMware, Microsoft Hyper-V, Virtual Iron, Xen, Ubuntu (Server Edition), Software Virtualization, Para Virtualization, OS Virtualization, Oracle Virtualization, Storage Virtualization Technologies, Virtualization and Storage Management.

UNIT-V: SECURITY

UNIT-VI: DISASTER RECOVERY
Disaster Recovery Planning, Disasters in the Cloud, Disaster Management. Scaling a Cloud Infrastructure- Capacity Planning, Cloud Scale.

UNIT-VII: GRAPH REDUCTION
Introduction, Types of Graphs, Examples, Representation and Application.
UNIT-VIII: CASE STUDIES
Google APP Engine, Yahoo Hadoop, OBIEE and Windows Azure.

TEXT BOOKS:

1. George Reese, Cloud Application Architectures Building Applications and Infrastructure in the Cloud, O'Reilly Media Released, 2009.


REFERENCE BOOKS:


LIST OF EXPERIMENTS:

1. Design the following static web pages required for an online book store web site.

A. Home Page:

The static home page must contain the following three frames:

Top frame: Logo and the book store name and links to Home page, about us page, collections page, contact us page and cart page.

Left frame: At least four links for navigation, which will display the book catalogue of respective areas. For e.g.: when you click the link "Computer" the catalogue for computer books should be displayed in the right frame.

Right frame: The pages of the links in the left and top frame must be loaded here. Initially it will display the description of the web site, i.e., page of the Home link will be loaded.

<table>
<thead>
<tr>
<th>Logo</th>
<th>Name of the Book Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>About Us   Collections Contact Us Cart</td>
</tr>
<tr>
<td>Computer Electrical Electronic Bio-Tech</td>
<td>Description of the Web Site Sign In New User? Sign Up</td>
</tr>
</tbody>
</table>

B. Login Page:

The login page looks like as follows (Link this page to Sign In link):
2. Design the following static web pages for an online book store web site.

**A. Catalogue Page:**

The catalogue page should contain the details of books available in the web site. The details are as follows:

- a. Snap shot of cover page
- b. Text book name
- c. Author name
- d. Publisher
- e. Price
- f. Add to cart link.
B. Registration Page:
Design the Registration page with the following fields (Link this page to Sign Up link).

- a. First Name
- b. Last Name
- c. User ID
- d. Password
- e. Confirm Password
- f. Gender
- g. Date of Birth
- h. Address
- i. Postal Code
- j. Linguistics
- k. Mobile No.
- l. Email-ID

C. Cart Page:

<table>
<thead>
<tr>
<th>Logo</th>
<th>Name of the Book Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>About Us</td>
</tr>
<tr>
<td>Collections</td>
<td>Contact Us</td>
</tr>
<tr>
<td>Cart</td>
<td></td>
</tr>
</tbody>
</table>

Computer
Electrical
Electronic
Bio-Tech

**Selected Books**

<table>
<thead>
<tr>
<th>Book Name</th>
<th>Price</th>
<th>Quantity</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML bible</td>
<td>399.00</td>
<td>2</td>
<td>INR 798.00</td>
</tr>
<tr>
<td>HTML</td>
<td>355.00</td>
<td>1</td>
<td>INR 355.00</td>
</tr>
</tbody>
</table>

**Total amount (INR): 1153.00**

3. Write a JavaScript code to validate the following fields of the registration page.

   a. First Name/Last Name - should contain only alphabets and the length should not be less than 3 characters.
   b. User ID - It should contain combination of alphabets, numbers and _. It should not allow spaces and special symbols.
   c. Password - It should not be less than 8 characters in length.

4. Write a JavaScript code to validate the following fields of the registration page.

   a. Date of Birth - It should allow only valid date; otherwise display a message stating that entered date is invalid. Ex. 29 Feb. 2009 is an invalid date.
   b. Mobile No. - It should allow only numbers and total number of digits should be equal to 10.
c. E-mail id - It should allow the mail id with the following format:
   Ex. mailid@domainname.com

5. Apply the following styles to static pages of online book store web site using CSS (Cascading Style Sheets):
   a. Fonts and Styles: font-family, font-style, font-weight and font-size
   b. Backgrounds and colors: color, background-color, background-image and background-repeat
   c. Text: text-decoration, text-transformation, text-align and text-indentation, text-align
   d. Borders: border, border-width, border-color and border-style
   f. Selectors, Classes and Layers.

6. Write an XML file which includes the following:
   a. Title of the book
   b. Author of the book
   c. ISBN number
   d. Name of the publisher
   e. Edition
   f. Price
   i. Write a Document Type Definition (DTD) or XML Schema to validate the above XML file.
   ii. Display the contents of the XML file with the following format using XSL.

      The contents should be displayed in a table. The header of the table should be in color grey, and the author names should be displayed in red color, bold and capitalized. Use your own colors for remaining fields.

7. a. Deploy web pages of online book store web site using Apache Tomcat web server and then navigate them thorough the default port number of the tomcat web server.
   b. Write a Java Servlet program for displaying the system date.
   c. Write a Java Servlet program to red user name and his/her favorite color from the html form. Display the name of the user in green color and set user favorite color as a background color to the web page.
8. Write a Java Servlet program to read the user id and password entered in the Login form and authenticate with the values (user id and passwords) available in the cookie and web.xml file. If he/she is a valid user (i.e., user id and password match) you should welcome him/her by user id otherwise you should display a message stating that you are not an authorized user. Use the following methods for storing user id's and passwords:

a. Using Cookies - Assume four user id's user1, user2, user3 and user4 and their passwords pwd1, pwd2, pwd3 and pwd4 respectively. Create four cookies on four user id's and passwords.

b. Initialization Parameters in web.xml - Store the user id's and passwords in the web.xml file and access them through the servlet by using the getInitParameters() method.

9. Write a Java Servlet or JSP to store user details (entered in the Registration Form) into the database using JDBC. Use any RDBMS as backend for storing user details.

10. Write a Java Servlet or JSP to authenticate the user by reading user id and password entered in the Login form. Compare User id and password values with user id's and passwords stored at database. If he/she is a valid user (i.e., user id and password match) you should welcome him/her by name (first name + last name), otherwise you should display a message stating that you are not an authorized user.

11. a. Write a Java program for storing books details like Name of the text book, author, publisher, edition and price into the database using JDBC. Store books in database based on the category (i.e., Computer/Electrical/Electronic/Bio-Tech).

b. Write a Java servlet or JSP for updating catalogue page to extract books details from the database and then display them in tabular format using JDBC.

12. HTTP is a stateless protocol. Session is required to maintain the state. The user may add some items to cart from the catalogue page. He can check the cart page for the selected items. He may visit the catalogue again and select some more items. Here our interest is the selected items should be added to the old cart rather than a new cart. Multiple users can do the same thing at a time (i.e., from different systems in the LAN using the IP-address instead of localhost). This can be achieved through the use of sessions. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated. Modify your catalogue and cart pages to achieve the above mentioned functionality using sessions.
THE FOLLOWING EXPERIMENTS ARE TO BE DEVELOPED USING ADOBE FLASH TOOL:

1. Draw an object and apply the following animation techniques:
   a. Motion Tween  
   b. Rotation  
   c. Shrink and Grow  
   d. Shape Tween  
   e. Add Guide Layer

2. a. Animate a Flash movie that shows the truck moving behind the trees.  
   b. Animate a Flash movie that shows the Flag hoisting.

3. a. Animate a Flash movie that shows the Spotlight Masking. Use text as a masked object and circle as a mask object.  
   b. Create a Flash movie that shows the complete word will appear on the stage from letters that fly in from various points. Use graphical text while animating the movie.

4. Animate a Flash movie that shows rolling wheels on a moving vehicle. Create a movie clip symbol of a rolling wheel and then add two instance of that symbol to the vehicle. Apply motion tween to make the vehicle drive across the road.

5. Create a Flash movie that enables the user to click left and right arrow buttons to view the images of the Movie Clip in left and right directions respectively. Initially add a set of images to the Movie Clip and then view the images of the Movie Clip through the buttons by writing necessary action script code. 
   Note: Left and Right arrow buttons should be created by the user.

6. Create a Flash movie that accepts User Id and Password from the user. Validate User Id and Password fields whenever the user presses the submit button. If a user id and password are correct display a welcome message otherwise display a message as invalid user. Store different user's user id's and passwords using an array object.

7. Create a Flash movie that allows the user to control the movement of the movie clip through the keyboard. Once the
user presses the Left, Up, Right and Down arrow keys of the keyboard, the movie clip should move in Left, Upward, Right and Downward directions respectively. Make sure that, the movie clip will move in a specified boundary of the stage.

8. Write an Action Script application to sort N integer array elements.
9. Write an Action Script application to display Movie Clip's randomly.
10. Write an Action Script application to determine points along a circle.
11. Write an Action Script application to perform the following operations.
   a. Drawing a Line       b. Drawing a Curve
   c. Drawing a Rectangle  d. Filling a shape with specified color
   e. Filling a shape with gradient color
12. Write an Action Script application to apply the mask to an image.
13. Write an Action Script application to convert Indian currency to foreign currency.
14. Write an Action Script application to link MovieClip symbol with subclass of MovieClip class by using linkage property.
15. Write an Action Script application to design/validate the User Registration form.
UNIT-I: ENGINEERING ETHICS

UNIT-II: PROFESSIONAL IDEALS AND VIRTUES
Theories about virtues, professional responsibility, integrity, self-respect, sense of "responsibility". Self-Interest, Customs and Religion- Self-interest and ethical egoism, customs and ethical relativism, religion and divine command ethics. Use of ethical theories- resolving moral dilemmas and Moral leadership.

UNIT-III: ENGINEERING AS SOCIAL EXPERIMENTATION
Engineering as experimentation- similarities to standard experiments, learning from the past and knowledge gained. Engineering as Responsible experiments-Conscientiousness. Moral autonomy and accountability, the challenger case.

UNIT-IV: RESPONSIBILITIES AND RIGHTS

UNIT-V: GLOBAL ISSUES
Multinational corporations-Professional ethics, environmental ethics, computer ethics, Engineers as Managers, Consultants and Leaders. Engineers as managers - Managerial ethics applied to engineering profession.
TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION TO MANAGEMENT

UNIT-II: DESIGNING ORGANIZATIONAL STRUCTURES
Basic concepts related to organization - Departmentation and decentralization - Types of organizations - Merits, demerits and adoptability to modern firms.

UNIT-III: OPERATIONS MANAGEMENT
Principles and types of plant layout - Methods of production - Forecasting - Forecasting methods - Work study - Basic procedure involved in method study and work measurement - Statistical quality control: Factors affecting quality - Quality control using control charts (simple problems) - Acceptance sampling.

UNIT-IV: MATERIALS MANAGEMENT
Materials management objectives - Inventory - Types of inventory - Safety stock - Classical EOQ model - Need for inventory control - EOQ simple problems - ABC analysis - Purchase procedure - Stores management.

Marketing: Functions of marketing - Marketing mix - Channels of distribution.

UNIT-V: HUMAN RESOURCES MANAGEMENT (HRM)
Nature and scope of HRM - HRD and personnel management and industrial relations - Functions of HRM - Role of HR Manager in an organization - Performance appraisal - Job evaluation and merit rating - Motivation - Importance of motivation - Maslow's theory of human needs - McGregor's theory X and theory Y - Herzberg's two-factor theory.
UNIT-VI: PROJECT MANAGEMENT (PERT/ CPM)
Network analysis - Program evaluation and review technique (PERT) - Critical path method (CPM) - Identifying critical path - Probability of completing the project within given time - Project cost analysis - Project crashing (simple problems).

UNIT-VII: ENTREPRENEURSHIP
Introduction to entrepreneurship - Definition of an entrepreneur - Entrepreneurial traits - Entrepreneur vs. manager - Entrepreneurial decision process - Role of entrepreneurship in economic development - Social responsibilities of entrepreneurs - Opportunities for entrepreneurs in India and abroad - Women as an entrepreneur.

UNIT-VIII: CONTEMPORARY MANAGEMENT PRACTICES
Basic concepts of Just-In-Time (JIT) system - Total quality management (TQM) - Value chain analysis - Enterprise resource planning (ERP) - Business process outsourcing (BPO) - Globalization - Management challenges - Intellectual property rights - Supply chain management - Role of information technology in managerial decision making.

TEXT BOOKS:

REFERENCE BOOKS:
IV B.Tech. II Semester

10BT81201: SERVICE ORIENTED ARCHITECTURE
(ELECTIVE - III)

UNIT-I: INTRODUCING SOA

Fundamental SOA, Common Characteristics of Contemporary SOA, Common tangible benefits of SOA, Common pitfalls of adopting SOA.
The Evolution of SOA: An SOA Timeline, The continuing evolution of SOA, The roots of SOA.

UNIT-II: WEB SERVICES AND PRIMITIVE SOA

The Web Services Frame work, Services, Service descriptions, Messaging.


UNIT-III: WEB SERVICES AND CONTEMPORARY SOA (PART II-ADVANCED MESSAGING, METADATA, AND SECURITY)

Addressing, Reliable messaging, Correlation, Policies, Metadata exchange, Security, Notification and eventing.

UNIT-IV: PRINCIPLES OF SERVICE-ORIENTATION


UNIT-V: SERVICE LAYERS

Service-Orientation and Contemporary SOA, Service Layer abstraction, Application Service Layer, Business Service Layer, Orchestration Service Layer, Agnostic Services, Service Layer Configuration Scenarios.


UNIT-VI: SERVICE ORIENTED ANALYSIS

Part II-Service Modeling: Service Modeling, Service Modeling guidelines, Classifying Service model logic, Contrasting Service modeling approaches.

UNIT-VII: SERVICE ORIENTED DESIGN

Part I-Introduction: Introduction to Service-Orientated design, WSDL related XML Schema language basics, WSDL language basics, Service interface design tools.

Part II-SOA Composition Guidelines: SOA Composing steps, Considerations for choosing service layers, Considerations for positioning core SOA standards, Considerations for choosing SOA extensions.


UNIT-VIII: SERVICE ORIENTED DESIGN (PART IV-BUSINESS PROCESS DESIGN)

WS-BPEL language basics, WS- Coordination overview, Service Oriented Business process Design.


TEXT BOOK:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION
Definition, Objectives, Functional Overview, Relationship to DBMS, Digital libraries and Data Warehouses.

UNIT-II: INFORMATION RETRIEVAL SYSTEM CAPABILITIES
Search, Browse, Miscellaneous.

UNIT-III: CATALOGING AND INDEXING

UNIT-IV: DATA STRUCTURES
Introduction, Stemming Algorithms, Inverted file structures, N-gram data structure, PAT data structure, Signature file structure, Hypertext data structure.

UNIT-V: AUTOMATIC INDEXING
Classes of automatic indexing, Statistical indexing, Natural language, Concept indexing, Hypertext linkages.

UNIT-VI: DOCUMENT AND TERM CLUSTERING
Introduction, Thesaurus generation, Item clustering, Hierarchy of clusters.

UNIT-VII: USER SEARCH TECHNIQUES
Search statements and binding, Similarity measures and ranking, Relevance feedback, Selective dissemination of information search, Weighted searches of Boolean systems, Searching the Internet and hypertext. Information Visualization: Introduction, Cognition and perception, Information visualization technologies.

UNIT-VIII: TEXT SEARCH ALGORITHMS
Introduction, Software text search algorithms, Hardware text search systems.
Multimedia Information Retrieval: Audio retrieval, Graph retrieval, Image retrieval, Video retrieval.

Information System Evaluation: Introduction, Measures used in system evaluation, Measurement example - TREC results.

TEXT BOOK:


REFERENCE BOOKS:


IV B.Tech. II Semester
10BT81203: **INTELLECTUAL PROPERTY RIGHTS**  
(ELECTIVE - III)  

<table>
<thead>
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<tr>
<td>4</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
</tbody>
</table>

**UNIT-I: INTRODUCTION**
Definition, Attributes of intellectual property, Divisions of intellectual property: copy rights, patents, designs, Trademarks. Development of the law of intellectual property and international laws impact on it, Benefits of protection of intellectual property, Local Remedies, Introduction to PTO and FTO.

**UNIT-II: INTERNATIONAL LAW ON INTELLECTUAL PROPERTY**

**UNIT-III: LAW OF COPYRIGHT IN INDIA**
Introduction, Object of Copyrights, Extension of Copyrights to various new fields, Statement of objects and Reason, Subject- matter of Copyrights, Modes of Copyrights, Registration of Copyrights, Copyrights societies, International Copyrights, Authorities under the Copyright act.

**UNIT-IV: LAW OF PATENTS IN INDIA**
Introduction, How patent is granted and Rights conferred thereby, Amendment, Restoration, Surrender and Revocation of Patents, Anticipation.

**UNIT-V: LAW OF TRADEMARKS IN INDIA**
Introduction, Development of the Law of Trademarks, International Conventions, Treaties and Protocols on implementation of Inter-State Trade marks, Registration of Trademarks.

**UNIT-VI: LAW OF DESIGNS IN INDIA**
Introduction, Registration of designs, Copyright of registered designs, Controller functions and powers against the orders, Industrial and International Exhibition and Piracy of Registered designs.

**UNIT-VII: THE GEOGRAPHICAL INDICATIONS OF GOODS**
Introduction, Geographical indication, The Register and conditions for registration, procedure for registration, Rights conferred by registration, Infringement and reliefs.
UNIT-VIII: CASE STUDIES

Patents (Google, Yahoo and Microsoft etc), Disputes.

TEXT BOOKS:


REFERENCE BOOKS:


IV B.Tech. II Semester
10BT81204: DISTRIBUTED SYSTEMS
(ELECTIVE- III)

UNIT-I: INTRODUCTION

UNIT-II: TIME AND GLOBAL STATES
Clocks, events and process states, Synchronizing physical clocks, Logical time and logical clocks, Global states, Distributed debugging, Distributed mutual exclusion.

UNIT-III: NETWORKING AND INTERNETWORKING
Introduction, Types of network, Network principles, Internet protocols, Network case studies: Ethernet, Wireless LAN and ATM.

UNIT-IV: INTER PROCESS COMMUNICATION
Introduction, The API for the internet protocols, External data representation and marshalling, Client server communication, Group Communication, Case study.

Distributed Objects and Remote Invocation: Communication between distributed objects, Remote procedure call, Events and notifications, Java RMI case study.

UNIT-V: OPERATING SYSTEM SUPPORT
Operating system layer, Protection, Process and Threads, Communication and invocation, Operating System Architecture.

UNIT-VI: DISTRIBUTED FILE SYSTEMS

Name Services: Introduction, Name services and the Domain Name System, Directory and discovery services, Case study of the Global Name Services.
UNIT-VII: DISTRIBUTED TRANSACTIONS AND CONCURRENCY CONTROL

Transactions, Nested Transactions, Locks, Optimistic Concurrency control, Time stamp ordering. Flat and nested distributed transactions, Atomic commit protocols, Concurrency control in Distributed transactions, Distributed deadlocks, Transaction recovery.

UNIT-VIII: DISTRIBUTED SHARED MEMORY

Design and implementation issues, Sequential consistency and ivy, Release consistency and Munin, Other consistency models.

TEXT BOOK:


REFERENCE BOOKS:


UNIT-I: INTRODUCTION TO CLIENT SERVER COMPUTING
Evolution of corporate computing models from centralized to distributed computing, client server models, Benefits of client server computing, pitfalls of client server programming.

UNIT-II: CORBA WITH JAVA
Review of Java concept like RMI, RMI API, JDBC, Client/Server CORBA-style, The object web.

UNIT-III: INTRODUCING C# AND THE .NET PLATFORM
Object-Oriented Programming with C#, Callback Interfaces, Delegates and Events, Understanding .NET Assemblies.

UNIT-IV: BUILDING C# APPLICATIONS
Type Reflection, Late Binding and Attribute-Based Programming, Object Serialization and the .NET Remoting Layer, Data Access with ADO.NET, XML Web Services.

UNIT-V: CORE CORBA / JAVA
Two types of Client/Server invocations-static, dynamic, The static CORBA, first CORBA program, ORBlets with Applets, Dynamic CORBA-The portable count, the dynamic count, multi count.

UNIT-VI: EXISTENTIAL CORBA
CORBA initialization protocol, CORBA activation services, CORBA IDL mapping, CORBA java-to-IDL mapping, The introspective CORBA/Java object.

UNIT-VII: JAVA BEAN COMPONENT MODEL
Events, properties, persistency, Introspection of beans, CORBA Beans.

UNIT-VIII: EJBS AND CORBA
Object transaction monitors, CORBA OTM's, EJB and CORBA OTM's, EJB container framework, Session and Entity Beans, The EJB client/server development Process, the EJB container protocol, support for transaction, EJB packaging, EJB design Guidelines.
TEXT BOOKS:


REFERENCE BOOKS:


UNIT-I: ENVISIONING ARCHITECTURE

UNIT-II: CREATING AN ARCHITECTURE
Quality Attributes, Achieving qualities, Architectural styles and patterns, designing the Architecture, Documenting software architectures, Reconstructing Software Architecture.

UNIT-III: ANALYZING ARCHITECTURES
Architecture Evaluation, Architecture design decision making, ATAM, CBAM.
Moving from One System to Many: Software Product Lines, Building systems from off the shelf components, Software architecture in future.

UNIT-IV: INTRODUCTION TO DESIGN PATTERNS
Definition, Pattern Description, Organizing catalogs, Role in solving design problems, Selection and Usage.

UNIT-V: CREATIONAL PATTERNS
Abstract factory, builder, factory method, prototype, singleton.
Structural Patterns: Adapter, bridge, composite, decorator, façade, flyweight, Proxy.

UNIT-VI: STRUCTURAL PATTERNS
Decorator, façade, flyweight, Proxy.
Behavioral Patterns: Chain of responsibility, command.

UNIT-VII: BEHAVIORAL PATTERNS
Interpreter, iterator, mediator, memento, observer, state, strategy, template method, and visitor.
UNIT-VIII: CASE STUDIES
Designing a Document Editor - Design issues of Lexi Editor in Design Patterns, The World Wide Web - a case study in interoperability.

TEXT BOOKS:

REFERENCE BOOKS:
2. Eric Freeman and Elisabeth Freeman, Head First Design patterns, O'REILLY, 2007.
UNIT-I: DATA COMMUNICATIONS AND NETWORK MANAGEMENT OVERVIEW

UNIT-II: BASIC FOUNDATIONS

UNIT-III: SNMPV1 NETWORK MANAGEMENT

UNIT-IV: SNMPV2 NETWORK MANAGEMENT
SNMPv2, Major Changes in SNMPv2, SNMPv2 System Architecture, SNMPv2 Structure of Management Information, SNMPv2 Management Information Base, SNMPv2 Protocol.

UNIT-V: SNMPV3 NETWORK MANAGEMENT

UNIT-VI: REMOTE MONITORING
RMON, Remote Monitoring, RMON SMI and MIB, RMON1, RMON2, A Case Study on Internet Traffic Network management tools, systems and engineering.

UNIT-VII: TELECOMMUNICATIONS MANAGEMENT NETWORK
TMN Conceptual model, TMN standards, TMN Architecture, TMN implementation, Network Management Applications.
UNIT-VIII: BROAD BAND NETWORK MANAGEMENT

WAN, Wired and optical access Networks, advanced management topics. Distributed Network Management, Reliable and Fault Tolerant Network Management.

TEXT BOOK:


REFERENCE BOOKS:

UNIT-I: INTRODUCTION


UNIT-II: FEED FORWARD NEURAL NETWORKS

UNIT-III: FEEDBACK NEURAL NETWORKS


UNIT-IV: FUZZY RULES AND FUZZY REASONING
Introduction, Extension Principles and Fuzzy Relations, Fuzzy If-Then Rules, Fuzzy Reasoning.


UNIT-V: OPTIMIZATION AND GENETIC ALGORITHMS
UNIT-VI: NEURO FUZZY CONTROL


Neuro Fuzzy Control-II: Introduction, Reinforcement Learning Control, Gradient-Free Optimization, Gain Scheduling.

UNIT-VII: NEURO FUZZY MODELING


UNIT-VIII: ADVANCED APPLICATIONS:

ANFIS Applications: Introduction, Printed Character recognition, Inverse Kinematics Problem, Automobile MPG Identification, Nonlinear System Identification, Channel Equalization.


TEXT BOOK:


REFERENCE BOOKS:

1. LiMin Fu ,Neural Networks in Computer Intelligence, Tata McGraw-Hill Edition
UNIT-I: INTRODUCTION
Importance of user Interface - definition, importance and benefits of good design, a brief history of Screen design.

UNIT-II: THE GRAPHICAL USER INTERFACE
Popularity of graphics, the concept of direct manipulation, graphical system, Characteristics, Web user interface-popularity, characteristics, Principles of user interface design.

UNIT-III: DESIGN PROCESS
Human interaction with computers, importance of human characteristics, human consideration in design, Human interaction speeds, Understanding business functions.

UNIT-IV: SCREEN DESIGNING
Design goals - Screen planning and purpose, organizing screen elements, ordering of screen data and content - screen navigation and flow - Visually pleasing composition - amount of information - focus and emphasis - presentation information simply and meaningfully - information retrieval on web - statistical graphics - Technological consideration in interface design.

UNIT-V: WINDOWS
System menus and Navigation schemes, selection of window, selection of devices based controls and screen based controls, organize and layout windows and web pages, Touch screen and surface computing.

UNIT-VI: COMPONENTS
Text and messages, Icons and images, Multimedia, Colours - colours uses, problems with colours, choosing colours.

UNIT-VII: SOFTWARE TOOLS
UNIT-VIII: INTERACTION DEVICES

Keyboard and function keys - pointing devices - speech recognition, digitization and generation, image and video displays.

TEXT BOOKS:

1. Wilbert O Galitz, The essential guide to user interface design, Wiley India education.
2. Ben Shneidermann, Designing the user interface, 3rd edition Pearson Education Asia.

REFERENCE BOOKS:

UNIT-I: OVERVIEW OF WIRELESS NETWORKS

UNIT-II: CHARACTERISTICS OF THE WIRELESS MEDIUM
Introduction, radio propagation mechanisms, path-loss modeling and signal coverage, effects of multi path and Doppler, channel measurement and modeling techniques.

UNIT-III: PHYSICAL LAYER ALTERNATIVES FOR WIRELESS NETWORKS
Introduction, applied wireless transmission techniques, short distance base band transmission, UWB pulse transmission, Carrier Modulated transmission, Broadband modems for higher speeds, Spread Spectrum transmissions, High-speed Modems for Spread spectrum technology, Diversity and Smart Receiving Techniques, Comparison of modulation schemes, Coding techniques for wireless communications.

UNIT-IV: WIRELESS MEDIUM ACCESS ALTERNATIVES
Introduction, fixed-assignment access for Voice-Oriented networks, Random access for Data-Oriented Networks, Integration of Voice and Data Traffic - Data Integration in voice- Oriented Networks and Voice Integration into Data- Oriented Networks.

UNIT-V: NETWORK PLANNING

UNIT-VI: WIRELESS NETWORK OPERATION
Introduction, mobility management, radio resources and power management, security in wireless networks.
UNIT-VII: WIRELESS WANS
GSM, Mechanisms to support a Mobile Environment, communications in the infrastructure, CDMA - The IS-95 CDMA Forward Channel, The IS-95 CDMA Reverse Channel, Mobility and Radio Resource Management in IS-95.

UNIT-VIII: WIRELESS LANS
Evaluation of the WLAN industry, Wireless Home networking, IEEE 802.11, Bluetooth, interface between Bluetooth and 802.11, Zigbee wireless communications protocol.


TEXT BOOKS:


REFERENCE BOOKS: