COMPUTER APPLICATION (VOCATIONAL COURSE) FOR

B.A./B.Com/B.Sc. Part III

Paper-I

Paper Name : Web Authoring tools

Unit I

Data communication, Components of Data Communication System, Transmission Media-Coaxial, UTP, Optical-Fibber, Wireless, Transmission Mode- Simplex, Half Duplex, Full Duplex, Introduction to networking, LAN, MAN, WAN, network topologies.

Unit II

Evolution of Internet, Basic internet terms (Client, Server, MODEM, Web page, Web site, Home page, Browser, URL, ISP, Web server, Download & Upload, Online & Offline etc), Internet applications (Remote login, VoIP, Video Conferencing, Audio-Video streaming, Chatting etc). E-Mail, Advantages, working, Anatomy of an e-mail Message, basic of sending and receiving, E-mail Protocol.

Unit III

Introduction to World Wide Web: History, Working of Web Browsers, Its functions, Search engine category, Concept of Hyper Text Transfer Protocol (HTTP), Web Servers, Internet Explorer, Component of Web Publishing, Site and Domain Name, Overview of Intranet and its applications. Introduction to Advanced Technologies: Big Data, Cloud Computing, Internet of Things, Artificial Intelligence(Introduction only).

Unit IV

HTML, Designed Tools, HTML Editors, Issue in Web Site Creations and Maintenance, FTP S/W for Upload Website, Elements of HTML & Syntax, Building HTML Documents, Use of Font Size and Attributes, Backgrounds, Formatting tags, Images, Hyperlinks, div tag, List Type and its Tags, Table Layout, Use of Frames and Forms in Web Pages.

Unit V

Basic of Cyber Security and Cyber Crime: Computer Ethics and Application Programs, Cyber Law, Introduction to IT laws &Cyber Crimes — Internet, Hacking, Cracking, Viruses, Virus Attacks, Software Piracy, Intellectual property, Legal System of Information Technology, Mail Bombs, Bug Exploits. Software Piracy, Firewall, Threats, Hacking and Cracking (basic concepts only for these topics).

Recommended Books:
1. The Colete eference: HTML & XHTML.; Thomas A. Powel, 4th Edn.
2. Mastering HTML 4.0 by Deborah S.Ray an Eric J. Ray From BPB
3. Mastering Java Script, BPB publication.
4. Internet and web technology by Raj Kamal, TMH Publication 2. Steven Holzner,
5. The Complete Reference Java Scripts,, Tata McGraw – Hill,3rd Edn.
6. Java Script, Don Gosselin,Vikas publications

Paper Name : Software Engineering & E-Commerce

Unit I

Introduction to software engineering: What is software engineering, software engineering principles, Software characteristics, applications. Software Development life-cycle, Models: Waterfall model, Incremental model, spiral model, Prototyping Model.

Unit II

Software requirements: Functional- non-functional requirements, User requirement, System requirements, Software requirements documentation, Software Requirement engineering process, Feasibility studies, Requirements elicitation and analysis, software prototyping, Software Reliability, Software Reusability. Software design: Basics of software design, Software Design Techniques, Data design, Data Flow Diagram.

Unit III

A strategic approach to software testing, test strategies for convention software, Black-box and white box testing, validation and system testing, and debugging; System implementation, maintenance and documentation;

Unit IV

An introduction to Electronic commerce: What is E-Commerce (Introduction And Definition), Main activities E-Commerce, Goals of E-Commerce, Technical Components of E-Commerce, Functions of E-Commerce, Advantages and disadvantages of E-Commerce, Scope of E-Commerce, Electronic Commerce Applications, Security Threats of E-Commerce, E-Commerce models.

Unit V

Electronic Data Exchange: Introduction, Concepts of EDI and Limitation, Applications of EDI, Disadvantages of EDI, EDI model, Electronic Payment System: Introduction, Types of Electronic Payment System, Value Exchange System, Credit Card System, Electronic Fund Transfer, Paperless bill, Modern Payment Cash, Electronic Cash. Introduction to e-banking and support services.

Recommended Books:
1. Pressman, Roger (2001) Software Engineering; A Practitioner's Approach, 8th ed. M Graw-Hill,2014.
2. Girdhari Singh, Shalinipuri; Software Engineering;2022 Edn.Genius Publications
3. Jalote, Pankaj (7) An integrated Approach to Software Engineering 2nd Ed.
4. Simon Bennett, Steve McRobb and Ray Farmer, " Object-Oriented Systems Analysis and Design Using UML" 4th Edition,McGraw Hill Education, 2010
5. Ravi Kalakota, "Electronic Commerce: A Manager's Guide", Addison-Wesley Professional, Edition 2012.
6. Ian Daniel, "E-Commerce get it Right", Neuro Digital Publication, 2011.
7. Lexis Leon; Enterprise Resource Planning;TMH

Paper-III

Paper Name : Web Authoring Tools Lab
Content : Lab practical's based on paper I.