ADCA SYLLABUS

Paper-1

Fundamentals of Computers & Information Technology

UNIT – I
Introduction to Computer and IT

Brief history of development of Computers. Computer System Concept, Computer System Characteristics, Capabilities and Limitations, Types of Computer-Analog, Digital, Hybrid, General, Special Purpose, Micro, Mini, Super. Generations of Computers.
Types of PC, Computer Organization and working, basic components of a Computer System Control Unit, ALU, Input / Output Functions and characteristic, Memory-RAM, ROM, PROM, EPROM, EEPROM and other types of Memory.

UNIT- II
Input Devices
Keyboard, Mouse, Trackball, Joystick, Digitalizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-Code Reader, Voice Recognition, Light Pen, Touch Screen.

Output Devices
Monitors –
Characteristics and types of Monitors – Digital, Analog, Size, Resolution, Refresh Rate, Interlaced/Non-Interlaced, Dot Pitch, Video standard - VGA, SVGA, XGA etc.
Printers – Daisy Wheel, Dot Matrix, Inkjet, Laser, Line Printer, Plotter, Sound Card And Speakers.

UNIT – III
Storage Devices

Storage Fundamentals – Primary Vs Secondary

Data Storage and Retrieval methods – Sequential, Direct and Index-Sequential. Various Storage Devices – Magnetic Tape, Magnetic Disks, Cartridge tape, data Drives, hard disk drives, Floppy disk, Optical disk – CD, VCD, CR-R, CD - ROM, DVD.

Number System
Data Representation in Computers. Number System of Computers – Decimal, Binary, Octal, Hexa - Decimal Representation for their Conversion, Coding System – ASCII, BCD, EBCDIC etc. and Arithmetic of Number System.

UNIT – IV
Computer Software
Need, Types of Software's – System Software, Application Software. System Software – Operating System, utility Program, Programming languages, Assemblers, Compilers and Interpreter. Operating System– Functions, Types-Batch, Single, Multiprogramming, and Multiprocessing.
Programming Languages – Machine, Assembly, High level, 4GL their merits and Demerits. Application Software – Word Processing, Spreadsheet, presentation Graphics,

Data Base Management Software, Characteristics, uses and examples and area of Application of each of them.

Computer Virus
• Virus working principals.
• Types of Viruses.
• Virus detection and Prevention.

UNIT – V
Data Communication and Networks
Analog & Digital Signals, Communication Process, Direction of Transmissions Flow-Simplex, Half – Duplex, Full Duplex. Communication Protocols. Communication Channels – Twisted, Coaxial, Fiber optic, serial and Parallel Communication.
Modem – Working and Characteristics, Types of N/W connections – Dialup, Leased Lines, ISDN, Types of Network – LAN, WAN, MAN etc.Topologies of LAN – Ring, Bus, Star, and Mesh for tree Topologies. Component of LAN – Media, NIC, NOS, Bridges, HUB, Routers, Repeaters and Gateways.

Paper- 2
PC Packages
(MS Word, MS Excel, MS Power Point, MS Access)
UNIT- I
MS-Word: -

Introduction to Word Processing, Introduction to MS-Word: Features, Creating, Saving, and opening document in word, Toolbars, Rulers, Menus, keyboard Shortcuts. Editing a Document- Moving, scrolling in a document, opening multi Document windows, editing text – selecting, inserting, coping, deleting, and moving text Etc. Previewing documents, printing documents. Formatting Documents: Paragraph formats, aligning text and paragraph, Borders & Shading, header & Footer, Auto formatting, Auto correct, Bullets, numbering, Templates & wizards.

UNIT – II
Advanced Features of MS-Word.
Spell check, Thesaurus, find & Replace, Inserting – page Numbers, pictures, files, Auto text, Symbols etc. Creation & working with tables, Document protection, Adding Graphics, mail merge, envelops & mailing labels. Macros etc.

UNIT-III
MS-Excel
Worksheet basics, Creating worksheet, entering data into worksheet, heading info., Data, text, dates, alphanumeric values, saving & quitting from worksheet. Opening & moving around in an existing worksheet. Toolbars and Menus, keyboard Shortcuts. Working with Single and multiple workbooks – coping, renaming, Moving, adding, and deleting, coping entries and moving between workbooks.

UNIT IV
Working with formulas & cell referencing - Auto sum - Coping Formulas - Absolute & Relative addressing. Working with ranges – Creating, editing and selecting Ranges. Formatting of Worksheet – Auto Format, Changing – alignment, Character Styles, Column width, date format, borders & colors, currency sign. Graphics and Charts – Using wizards, various chart type, Formatting grid lines & legends Previewing & printing worksheet – page setting, print tittles, adjustment Margins, page break, headers and footers.
Functions – Date & Time, Math's for Trigonometry, Statistical, Text and Logical Functions, Database. Creating and using Macros. Database – Creation, Sorting, Query & filtering a database. Multiple Worksheets – Concepts, Creating & using.

UNIT – V
MS-PowerPoint: -
Creating a New Presentation, Working with Presentation, using wizards, Slides & its different views, Inserting, Deleting and copying of slides, Working with Notes, Handouts, Adding Graphics, Working with PowerPoint objects, designing & presentation of a slide show, printing Presentations, Notes, Handouts with print options.

DTP: Paper- 3
DTP (Desk Top Publishing)
Kinds of DTP software, CorelDraw: Different versions, Ventura Publisher, Adobe Photo Shop, MS - Publisher, MS-office: Word, Excel, PowerPoint, Access, Paint

Shop Pro-5, Quark x-press, Lotus Application, I photo plus, Photo Finish
(For Scanning), Omni Page Limited Edition (OCR) Aldus Page Maker.
PageMaker7 .0 Feature:
File:- New, Open, Save, Save all, Revert, Export, Place, Links, Book Preference,
Page Setup, Print, Exit.
Edit: Copy, Paste, and Multiple paste, select all, Paste Special, Insert Object, Edit
Story Utilities: Aldus Assitions, Index Entry, Show Index, Create Index, Create
TOC
Layout: View, Guides and rules, Column guides, go to Page, Insert Page,
Remove Page, Display master items, Auto flow.
Types: Font, Size, Leading, Set width, Track, Type Style, Type Space, Paragraph,
Indents/tabs, Hyphenation, Alignment, Style, Define Style
Element: Fill and link, Rounded corners, Define colors.
Windows: Arrange icons, Tile, Cascade, Tool box, Style Palette, Color Palette,
Library palette
Help: Contents, Search, Shortcuts, using PageMaker Help, Learning PageMaker
7.0, About PageMaker.

Paper- 4

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Accounting-
Journal, Ledger, Cash Book, Day Book, Trial Balance, Final Account

Tally-
4.5, 5.4, 7.0, 8.1, 9.0, Erp9

Internet & Web Page Designing
Paper 5
UNIT – I
INTERNET
Evolution, Protocols, Interface Concepts, Internet Vs Intranet, Growth of Internet,
ISP, Connectivity – Dial – up, Reused Line, VSAT etc., URLs, Domain names,
Portals, Application, E - mail.
Concepts, POP and WEB based E-mail, Merits, addresses, Basic of Sending &
Receiving, E-mail protocols, Mailing list, Free E-mail Services.
Internet Protocols: -
Data Transmission Protocols, client/server Architecture & its Characteristics, FTP
& its usages. Telnet Concept, Remote Logging, Protocols, Terminal Emulation,
Message Board, Internet Chatting.

UNIT – II
WWW (World Wide Web)
History, Working, Web Browsers, its Functions, concept of search Engines,
Searching the web, HTTP, URLs, Web server, Web Protocols.

UNIT-III
Concepts, Domain name Registration, space on Host server for web site, HTML, Design Tools, HTML editors, Image editors, Issues in web site creation & Maintenance, FTP S/W for upload web site.

Paper 6
UNIT – IV
HTML –
Concepts of Hypertext, versions of HTML, Elements of HTML Syntax, Head & Body Sections, Building HTML Documents, Inserting texts, Images, Hyperlinks, Backgrounds and Color Controls, Different HTML Tags, Table Layout and Presentation, use of Font size & attributes, List types and its tags, use of Frames And forms in web pages

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