

# Syllabus – 1 YEAR

## Module I

### Basic Microsoft Apps:

Paint, Notepad, WordPad. Create File, Folder, File/ folder properties, Delete, Modify, Hide, search file folder, concept of Path, windows components, Dialogue Boxes, preview panels, control panel, & other Practical related tasks. Introduction To Microsoft Office Package .

### Microsoft Word 2010 :

Creating a new document, saving & Opening a document, print and print preview commands, save and save As, Cut, copy and delete commands, format painter, inserting page break, blank page , cover page, clipart, shapes, picture smart art . different types of charts , header and footer, page number, word Art, Drop Cap, date & time , object linking and embedding, bullets and numbering, sorting, book marks, hyperlinks, text color, superscript and subscript, text alignment (left, right, center,justify) find and replace commands. Line spacing, paragraph border. Underline, bold and Italic text. Change case, strike through. Themes, page orientation, size of the page and columns of the page, line numbers, watermark, page color, page borders. Left indenting and right indenting, Table of contents, mail merge, thesaurus , spelling and grammar, Track changes, protect document, different types of page views.

### Computer Fundamentals /IT Tools and Applications:

#### 1. Computer Appreciation :

Basics of computers, Characteristics of Computers, Data Processing Cycle in Computers, Computer Generation, History of computers, Application of computers. Types of computers. CPU (Central Processing Unit) Control Unit, Arithmetic and Logic Unit.

#### 2. Memory units or Storage units :

- a) Bit
- b) Nibble
- c) Byte
- d) Kilobyte, Megabyte, Gigabyte, Terabyte, Seta byte.
- e) Word size
- f) File and record

I. Input Devices/media

II. Output Devices/media

III. Numbering System with conversion examples.

IV. Basic electronic gates.

### Computer Organization :

**Central Processing Unit :** Control Unit, Arithmetic Unit, storage unit, Instruction set of CPU and its registers, Different types of processors , Processor Speed.

**Memory Main Memory:** Storage Evaluation Criteria, Memory Organization, Capacity, Cache Memory, RAM,

SRAM, DRAM, Read Only Memories (ROM).

**Secondary Storage Devices:** Magnetic Disks, Floppy and Hard Disks, Optical Disks CD-ROM, Mass Storage Devices: USB thumb drive. Managing Disk Partitions, File System, memory card.

**Input Devices:** Keyboard, Mouse, Trackball, Joystick, Scanner, OMR, Bar-Code reader, MICR Digitizer, Card Reader, Voice Recognition Web Cam, Video Cameras.

**Output Devices:** Monitors, speakers, Printer and plotter. Dot matrix printer, inkjet printer, laser printer, Computer Output Micro Film (COM), Multimedia Projector, Speech synthesizer.

**Multimedia:** What is Multimedia, text, graphics, Animation, Audio, Images, Video, Multimedia Application in Education, Entertainment, Marketing.

**Computer Hardware and software:** Basic Hardware Components Of Computer , Relationship between Hardware and Software, System Software: different types of system software and their use, Application Software, Compiler, Name of some high level languages, free domain software. Utility software, spyware, firmware and live ware.

## Module-II MS OFFICE

### MS Excel -2010 Spreadsheet

Spreadsheet Concepts: Creating, Saving and Editing a Workbook, Inserting, Deleting Work Sheets, Entering data a cell/ formula Copying and Moving data from selected cells, handling operators in Formulae, Functions: Mathematical, Logical, Statistical, Text, Financial, Date and time functions, Using Function Wizard. Formatting a Worksheet: Formatting Cells: Changing data alignment, Changing date, number, character, or currency format, Changing font, Adding borders and colors, Printing worksheets, Charts and Graphics: Creating, Previewing, Modifying charts. Importing and exporting data in excel. Pivot table and pivot chart.

Practical's: daybook in excel. Salary statement in excel, conditional formatting in excel, Trial balance in excel, Attendance statement in excel, references and errors in excel, linking between two workbooks. Creating budget sheets in excel.

### Power Point Presentation-Version -2010.

Creating, Opening and Saving Presentations, Creating the look of your Presentation, Working in different views, Working with Slides, Adding and Formatting Text, Formatting Paragraphs, Checking Spelling and Correcting with Objects, Adding Clip Art and Other Pictures, Designing Slide Shows, Running and Controlling a Slide, Show, Printing Presentations. Speaker notes. Tables charts and smart arts.

### MS-ACCESS- 2010.

#### Introduction to MS ACCESS:

The menu system, File Types, The Toolbars, Visual Design and Wizards, The Command Window and the View, Window, Other features of the Access Interface.

#### Tables in Access:

Creating a New Table: The Table Wizard, Using the Table Designer, Using Tables, Operating a table, working on a table, modifying a table.

#### Managing Data:

Switching from Browse to Edit display, Entering and Editing Data, Appending data, Editing Data:

#### Using Queries:

Creating a Query: different types of queries using Query Wizard and SQL view , The Query Designer, Running the Query, Using the Query: The Cross Tab Wizard, Modifying the Query, The Query Designer.

#### Using Forms:

Auto Forms, The Form Wizard: Choosing Fields, Choosing a Style, Choosing Sort Order, Generating the Form, Using

Forms, Running a Form.

### Using the Report Wizard:

Auto Reports, Using the Report Wizard: Using the Group/ Total Report Wizard, Printing Reports: Filtering records for the printed report.

### Working with Relation Databases in Access :

Concept of relational databases, Entering and Viewing data using the Form Wizard, Query Wizard to work with Relational Databases, Using One-to-many Report Wizard, Using the view Window, Using Queries and SQL: Queries versus Views, The Query designer - Working with multiple tables, Directing output, Viewing SQL code, Maximizing the Table View, Running the Query, One-to-many and Many-to- one Queries: Filtered Joins, A grouped Query, The SQL SELECT command, Other SQL commands, Using Access databases.

### Module-III

#### Operating System.

##### Windows Operating:

An overview of different versions of Windows, Basic Windows elements, File Management through Windows, Using essential accessories: Systems tools - Disk cleanup, Disk Defragmenter, Entertainment, Games, Calculator, Imaging – Fax.

##### Command prompt-

Directory navigation, path setting, creating and using batch files, Drivers, files, Directories, directory structure.

**Application Management:** Installing, uninstalling, running applications. 4- Functions of operating system, different types of operating systems.

##### Photoshop

#### Basic Photoshop Correction & Retouching & Repairing :

1. Move Tool with Layers , Linking Layer Movement , Layer Sets , Move Via Layer Sets ,Locking Layer Movement, Layer Transparency, Layer Set Transparency ,Labeling Layers ,Adjustment Layers & Layer Adjustments , Brightness / Contrast, Levels, Hue / Saturation & De-saturate Cloning, Healing Brush, patch tool, Color Picking with the Eyedropper Tool, Blur, Sharpen, Dodge, & Burn ,Eraser Tool. Working With Selections, Layer Basics.
2. The Magic Wand Tool, Marquee Tools , Saving A Selection ,Moving A Selection , Duplicating an image via Selection, Crop Tool and Trimming The Image Transformations , Free Transform and Other Types of Transform ,Type Tool Introduction, Making a Text Box ,Type Palette: Font Type, Font Size, Type Kerning, Type Leading, Type Tracking, Faux Fonts, Transforming Type ,Warp Text ,ImageTransparency ,Image Adjustments ,Paint Bucket ,Custom Shape ,custom brush, Filters Intro ,Motion Blur ,Radial Blur ,Noise Filters, Wave Filters ,Fading Filters, Working With Paint Tools.
3. Layer Modes: Multiply, Screen, Dissolve, Color, Saturation, etc., Paintbrush Tool and Palette, Pencil, Clone Stamp, Gradient Tool. Gradient Editor, Gradient Layer, Drawing Straight Lines, Drawing Effects, Pattern maker. Correcting and Enhancing Digital Photos. Turning a photo into a collage. Gold effect of text. Colorful overlapping of letters. Placing an image in a text. Animation of text. Filling a shape with a photo. Borders and frames. Working with shapes in photoshop.
4. Image corrections using camera raw and Photoshop filters, Fixing images, Camera raw & HDR Corrections, Shadow and highlight, red eye and other tools, Vanishing point filter, Lens correction, Overview of adobe image ready.

#### Introduction to Internet

Growth of Internet, Owners of the Internet, Anatomy of Internet, ARPANET, Internet history of the World Wide Web,

Basic Internet Terminology. Internet Applications Commerce on the Internet, Governance on the Internet, Impact of Internet on Society – Crime on/ through the Internet.

### Internet Technology and Protocols :

- Internet Protocols TCP/IP, IP Address and its Format, TCP/IP Based packages, SLIP, PPP.
- Network and Network Devices: Network Architecture, Ethernet, FDDI, ATM.
- Characteristics of Local Area Network & Wide Area Network: Topology, Protocols and media, Implementation, Transmission, Access method and Technologies, Special consideration for the Blinds.
- Addressing in Internet : DNS, Domain Name and their organization, Understanding the Internet Protocol Address.
- Client Server Concepts: Their Architecture and applications.
- Getting Connected: Items needed to connect, Levels of Connectivity.

### Using the World Wide Web :

Evolution of WWW, Basic features, WWW Browsers, WWW Servers, HTTP, Universal Resource Locator (URL), Search Engines and their Categories, Searching Criterion, WWW and Hypertext.

**Browsers :** Basic features, Bookmarks, History, Progress indicators, Customization of browsers, Saving and Printing Web pages, Netscape Communicator, Internet Explorer.

### Electronic Mail

- Introduction to E-Mail: E-Mail Networks and Servers
- Email protocols - SMTP, POP3, IMAP4, MIME6.
- Structure of an E-Mail: E-Mail Address, E-Mail Header, Body, Attachments.
- E-Mail Clients: Netscape Mail Client, Outlook Express, Web based E-Mail.
- Email encryption: Address Book, Signature File.

### Module-IV

### HTML [HYPER TEXT MARK UP LANGUAGE]

Introduction to HTML, Document Layout, Header Elements, Section Headings, Block-oriented elements, Lists, Inline elements, Visual markup, Hypertext links, Uniform Resource Locators (URLs), Images, Forms, Tables, and Special Characters. Etc. Styles: inline style, outline style and external style. Designing static websites using html and JavaScript. Practical work dummy websites.

### Programming with C Language

- (1) Introduction to Programming The Basic Model of Computation, Algorithms, Flow-charts, Programming Languages, Compilation, Linking and Loading, Testing and Debugging, Documentation.
  - (2) Introduction to C Language Character set, Variables and Identifiers, Built-in Data Types, Variable Definition, Arithmetic operators and Expressions, Constants and Literals, Simple assignment statement, Basic input/output statement,
  - (3) Conditional Statements and Loops 1-Decision making within a program, Conditions, Relational Operators, Logical Connectives, if statement, if-else statement. Loops: - while loop, do while, for loop, Nested loops, Infinite loops, switch statement, Structured
  - (4) Arrays: 1- One dimensional arrays Array manipulation, Searching, Insertion, and Deletion of an element from an array, finding the largest / smallest element in an array.  
2- Two dimensional arrays (Addition/ multiplication of two matrices transpose of a square matrix.) 3- Null terminated strings as array of characters
  - (5) different types of string functions.
- Top-down approach of problem solving, Modular programming and functions, Standard Library of C functions, Prototype of a function Formal parameter list, Return Type, Function call, Block structure., Passing arguments to a Function, Call by reference, Call by value, Recursive Functions, Arrays as function arguments.