MULTIMEDIA AND WEB TECHNOLOGY

SYLLABUS FOR HIGHER SECONDARY FIRST YEAR COURSE

Objectives

1. To get proficiency in Handling Computer Networks and the web.
2. To get proficiency in creating and managing Web site.
3. To be able to write server & client scripts.
4. To design Graphical images using Image-Editing tools.
5. To get proficiency in audio & video capture and editing using software tools.
6. To get proficiency in creating presentation with Audio and Video clips.
7. To become an entrepreneur in IT field.

SYLLABUS FOR HIGHER SECONDARY FIRST YEAR COURSE

One Paper (Theory)   **Time : Three hours**   **Marks : 70**

Unitwise Distribution of Marks & Periods :

Unit	Title	Marks		Periods	
		Theory	Practical	Theory	Practical
Unit-1	Computer System	15	10	30	20
Unit-2	Computer Networks	10	05	15	10
Unit-3	Web Technology	25	10	40	20
Unit-4	Multimedia / Viva Voce	20	05	25	20
	Total :	**70**	**30**	**110**	**70**

Unitwise Distribution of Course Contents:

Unit-1 : COMPUTER SYSTEM :

Introduction to Computer, Hardware components of a computer, Block diagram. Input Output devices, Primary and Secondary memory.

System software, Operating systems, Internal and External commands.

Windows: Desktop, Icons, Files, Folders, Creating moving, Renaming, Saving, Deleting files &: Folders, Windows Explorer.

Documentation .: Opening/closing documents, typing, editing, saving documents, Fonts, colour, aligning documents, bullets, columns. Creating/using tables, using dictionary. Printing documents, Page setting.

Unit-2 : COMPUTER NETWORKS :

Network concepts, purpose of networks, types of networks, LAN, MAN, WAN, Network topologies and structures. Introduction to ISO/ OSI model of networks. Introduction to Internet. Transmission media : Twisted pair cable, coaxial cable, optical fiber, infrared, radio link, microwave link and satellite link.

Protocols : TCP/ IP, FTP, PPP, Telnet.
Concepts of Client & server (Tier concepts)
(Teachers have to explain concepts with examples)

Unit-3 : WEB TECHNOLOGY :

Web concepts : Introduction to web, Accessing' the web, web browsers, web pages, HTTP, URL, Domains & Domain Names, Resolving Domain Names, Web hosting.
Web services, e-mail, voice-mail, search engines.
HTML/DHTML :
Basic Tags of HTML : HTML, HEAD, TITKE, BODY (Setting the Fore color and Background. color, Background Image, Background Sound, Heading tag (HI to H6) and attributes (ALIGN), FONT tag and Attributes (Size : 1 to 7 Levels, BASEFONT, SMALL, BIG, COLOR), P, BR, Comment in HTML (<!>), Formatting Text (B, 1, U, EM, BLOCKQUOTE, PREFORMATTED, SUB, SUP, STRIKE, Ordered List- OL (LI, Type-I, I, A, a, Start, VALUE). Unordered List- UL (Bullet Type- Disc, Circle, Square, DL, DT, DD). ADDRESS Tag;

Creating Links : Link to other HTML documents or data objects, Links to other places in the same HTML documents, Links to places in other HTML documents.
Anchor Tag <A. HREF> and <A NAME>, Inserting Inline Images <IMG ALIGN. SRC, WIDTH, HEIGHT, ALT, Image Link, Horizontal Rules <HR ALIGN, WIDTH, SIZE, NOSHADE>;

Web Page Authoring Using HTML
Tables: Creating Tables, Border. TH. TR, TD, CELLSPACING, CELLPADDING, WIDTH, COLSPAN. CAPTION, ALIGN, CENTER;
Frames: Percentage dimensions, Relative dimensions, Frame- Src, Frameborder, height and width. Creating two. or more rows Frames <FRAMESET ROWS>, Creating two or more columns Frames <FRAMESET COLS>, <FRAME NAME SRC MARGINHEIGHT MARGINWIDTH SCROLLING AUTO NORESIZE>, <NOFRAMES>, <INORFRAMES>; Forms: Definition, Use- Written to a file, Submitted to a database such as MSAccess or Oracle, E-mailed to someone in particular, Forms involve two-way communication;
Form Tags: FORM, <SELECT NAME, SIZE, MULTIPLE/ SINGLE> <OPTION> .... </ SELECT>, <TEXTAREA NAME ROWS COLS>, </TEXTAREA>, METHOD. CHECKBOX, HIDDEN, IMAGE, RADIO, RESET, SUBMIT, INPUT <VALUE, SRC, CHECKED, SIZE, MAXLENGTH, ALIGN>;

Document Object Model :
Concept and Importance of Document Object Model Dynamic, HTML docuemts and Document Object Model.

Cascading Style Sheets
Introduction to Cascading Style Sheet (CSS), three ways of introducing the style sheets to your document. Basic Syntax; Creating and saving cascading style sheets. <STYLE> tag. Examples showing the linking of external style sheet files to a document; Inline and Embed, <DIV>tag : COLOR, BACKGROUND COLOR, FONT-FAMILY, FONT-STYLE, FONTSIZE and FONT-VARIANT; FONTWEIGHT, WORD-SPACING, LETTER-SPACING, TEXTDECORATION, VERTICAL-ALIGN, TEXT-TRANSFORM, TEXT-ALIGN, TEXTINDENT, LINEHEIGHT,

Introduction to Margin, Padding and Border,

MARGINS (all values), MARGIN-PROPERTY, PADDING (all values), PADDINGPROPERTY; BORDER (all values), BORDER-PROPERTY, BACKGROUNDIMAGE, BACKGROUND REPEAT;

Additional Features, Grouping Style Sheets, Assigning Classes; Introduction to Layers, <LAYER>, <ILA YER> tag.

extensible Markup Language (XML)

XML: Introduction;

Features of XML : XML can be used with existing protocols, Supports a wide variety of applications, Compatible with SGML, XML documents are reasonably clear to the layperson; Structure of XML Logical Structure, Physical Structure;

XML Markup: Element Markup i.e <foo>Hello</foo>, Attribute Markup i.e, (<!element.name property ="value">);

Naming Rules : used for elements and attributes, and for all the descriptors, Comments Entity Declarations : <! ENTITY name "replacement text">;

Element Declarations: <!ELEMENT name content>;

Empty Elements: <!ELEMENT empty. element EMPTY>;

Unrestricted Elements: <! ELEMENT any.element ANY>;

Element Content Models: Element Sequences i.e. <!ELEMENT counting (first, second, third, fourth», Element Choices <!ELEMENT choose (this.one | that.one>, Combined Sequences and Choices;

Element Occurrence Indicators : Discussion of Three Occurrence Indicators

'? (Question Mark)

* (Asterisk Sign)

+ (Plus Sign)

Character Content : PCDATA (Parseable Character data) <!ELEMENT text(#PCDATA), Document Type Declaration (DTD) and Validation;

Developing a DTD : Modify an existing SGML DTD, Developing a DTD From XML Code, either automatically or manually;

Viewing XML in Internet Explorer, Viewing XML using the XML Data Source Object. XSL (Extensible Style Sheet Language) or CSS (Cascading Style Sheet);

Scripting :

Introduction to scripting?

Understanding What is VB Script and Java Script.

Adding VB Script code to HTML page, VB Script Data type-Variant subtypes,

VB Script Variables: (Declaring variable, Naming restrictions, Assigning value to variables, Scalar variables and Arrays), VB Script Constants, VB Script Operators, and Operator precedence; VB Script Procedures and Variables.

Putting a Java Script in HTML code:

Java Script Blocks, Java Script Cock, Java Script Statements, Java Script Blocks, Java Script Comments, Java Script Assignment Operators.]

Unit-4 : MULTIMEDIA :

Basic concepts or Image : Digital Image and Digital image representation.

Image Formats: TIFF, BMP, JPG/JPEG, GIF, PIC, PDF, PSD.

Image Scanning with Scanner, setting up Resolution, size, File format of images, image preview, Grey Scale and Colour option.

PDF file format, Creating modification (PDF Reader/Writer)

Graphic Tools : Image Editing Software (Photoshop / Coreldraw)

Basic Concepts: An Introduction, Creating, Opening and saving files, Menus, Toolbox, Color control icons, Mode control icons, Window control icons; creating new images, Image capture (TWAIN) from scanner other files;

Image Handling : Cropping an image, adjusting image size, increasing the size of the work canvas, saving an image;

Layers : Adding layers, dragging and pasting selections on to layers, dragging layers between files, viewing and hiding layers, Editing layers, rotating selections, scaling an object, preserving layers transparency, moving and copying layers, duplicating layers, deleting layers, merging layers, using adjustment layers;

Channels and Masks : Channel palette, showing and hiding channels, splitting channels in to separate image, merging channels, creating a quick mask, editing masks using quick. mask mode;

Painting and Editing: Brushes palette, brush shape, creating and deleting brushes, creating custom brushes, setting brush options, saving, loading and appending brushes, Options palette;

Opacity, pressure, or exposure, paint fade-out rate, making selections, using selection tools, adjusting selections, softening the edges of a selection, hiding a selection border, moving and copying selections, extending and reducing selections, pasting and deleting selections, image tracing (CorelDraw).

Sound: Recording sound, Editing sound, Noise correction, Sound effects (Sound Forge)

Sound File format: AIFF, WAY, MIDI, MP3 ASF

SYLLABUS FOR MULTIMEDIA AND WEB TECHNOLOGY PRACTICAL

Total Marks : 30   **Total Periods : 70**

1. Working on computers :   **10 Marks**

Booting computer; Desktop Iicons, shortcuts,

taskbar, mouse pointer; typing, saving and printing a simple text file, drawing simple picture using MS Paint, using calculator option, customizing desktop, windows explorer, managing folders (creating, moving, deleting, renaming); using floppy disk drive, using CD/DVD drives; managing files (copying, moving, deleting, renaming); playing audio and video. Using Wordprocessing Software : MS-Office for the word processing spread sheet etc. Printing documents.

2.   Study of Networks :   **05 Marks**

Study of the LAN, Servers, Clients, Cables and Connectors, Hub/ switch (Basic idea only), Assigning IP Address to computers.

Connecting to the Internet, Opening an e-mail account.

3.   Designing Web page with following features: **10 Marks**

HTML Basic Tags (html|head/title/body/B/I/U/BR/HR)

Anchor/ Image insertion/ Linking

Table/ Frame/ Form.

4.   Viva Voce :   **05 Marks**

Five questions from the topics covered in the curriculum

❑   ❑   ❑