

## Core Paper VI :Semester – VI

### **CC-6 Internet Technologies and HTML5**

#### **BLOCK – I**

**Unit-1** :: Introduction to computer network, data communication,, components of data communication, data transmission modes

**Unit-2:** Data communication measurement, network types- LAN, MAN, WAN, wireless LAN, internet, intranet, extranet

**Unit-3: Unit-4:** Transmission Media: Introduction, Guided Media: Twisted pair, Coaxial cable, Optical fiber, RJ45, RJ11, RJ12, CAT5, UTP, HDMI, OTG Connectivity

#### **BLOCK-II**

**Unit-4:** LAN Technologies -Ethernet, fast Ethernet, gIga-bit ethernet, Virtual LAN, **OSI Layers: Overview of OSI Layers**, Functions and rules of protocol suit in physical\_layer, data link layer

**Unit-5 : OSI Layers:** Functions and rules of protocol suit in network layer, transport\_layer

**Unit-6 : OSI Layers:** Functions and rules of protocol suit in session layer, presentation layer and Application layer

#### **BLOCK-III**

**Unit-7:** Html History, What is Html?, Browsers pitfalls, HTML Elements HTML Attributes ,HTML Headings, HTML Paragraphs, HTML Formatting

**Unit-8 :** HTML Fonts , HTML Styles, HTML Links, HTML Images, HTML Tables, HTML Lists

**Unit-9 :** HTML Forms• HTML Iframe, HTML Layout, HTML Doctypes, HTML Head, HTML Meta, HTML Scripts

#### **BLOCK-IV**

**Unit-10:** HTML Media, HTML Audio, HTML Object, HTML Video, HTML YouTube, HTML Media Tags

**Unit-11:** CSS3 : The Power of CSS , Doing More with Less , A First Example o Challenges , Next Up Introducing CSS3, o What is CSS3?, The History of CSS, HTML5 Selectors and Pseudo Classes, Attribute Selectors , The Target Pseudo-Class ,UI Element States, Pseudo-Classes , Negation Pseudo-Class , Structural Pseudo-Classes , Fonts and Text Effects, Fonts on the Web o Font Services , The @font-face Rule o Text Shadow , Word Wrapping Colours, Gradients, Background Images, and Masks, Colour o The Opacity Property , Backgrounds , background-origin, and background-size Borders and Box Effects, Image Borders , Rounded Corners , Box Shadow Transitions, Transforms, and Animations, Transitions and Transforms, transitions

**Unit-12 :** CSS3 – Layout : Columns and Flexible Box, Flexible Box Model , Vendor Prefixes, What Are Vendor Prefixes? ,Maybe They Aren't So Bad , Strategies Embedding Media, Video Formats ,Styling Video Accessibility Features, Web Accessibility ,The CSS3 Speech Module, Media Queries, Targeting Widths and Devices with CSS3 Media Queries, Responsive Images and the viewport Metatag. Implementing CSS3 in the “Real World” Stuff That Aren't (Strictly) CSS, but Sure Is Useful , jQuery ,

HTML5, Modernizr, Preprocessors , Frameworks and Grid Systems, Going Forward/Additional Resources, What’s next?, Online Resources, Get Involved

**Practical :**

Networking exercises in a trial lab, where effects of different connectors, topologies in practical could be demonstrated.

Before moving to JavaScript practicals, students must get an idea about fundamental programming using Scratch (<https://scratch.mit.edu>). Students should be encouraged to learn Scratch on their own and work on assignments available online such as

<https://sites.google.com/site/christopherscfahs/scratch-programming/scratch-assignments> or <http://scratched.gse.harvard.edu/resources/uw-catapult-project>.

Alternatively, students may use Alice (<http://www.alice.org/index.php>) and learn basic programming. A lot of online assignments and spoken tutorials on YouTube would be helpful.

Practical exercises based on concepts listed in theory using HTML.

1. Create HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, Horizontal Line, Blinking text as well as marquee text.
2. Create HTML document with Ordered and Unordered lists, Inserting Images, Internal and External linking
3. Create HTML document with Table:

			Some image here	

4. Create Form with Input Type, Select and Text Area in HTML.
5. Create an HTML containing Roll No., student’s name and Grades in a tabular form.
6. Create an HTML document (having two frames) which will appear as follows:

About	This frame would show the contents according to the link clicked by the user on the left frame
Department 1	
Department 2	
Department 3	

7. Create an HTML document containing horizontal frames as

follows:

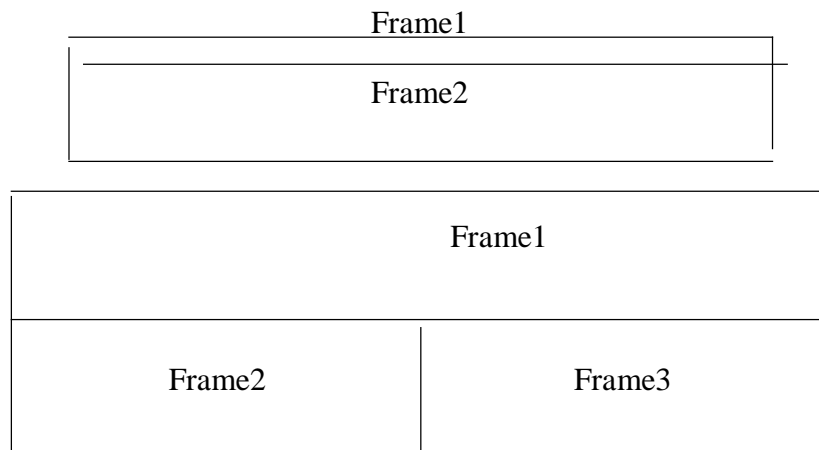
8. Department Names (could be along with Logos)
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Contents according to the Link clicked

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8. Create a website of 6 – 7 pages with different effects as mentioned in above problems.

9. Create HTML documents (having multiple frames) in the following three formats:



10. Create a form using HTML which has the following types of controls:

- I. Text Box
- II. Option/radio buttons
- III. Check boxes
- IV. Reset and Submit buttons

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**List of Practicals using Scratch : (self-learning by students)**

3. Join the Scratch community on [scratch.mit.edu](http://scratch.mit.edu). Explore featured projects and modify any one of them.
4. Create a game using SCRATCH similar to that of Beach Baby Volleyball. The game MUST meet the following objectives.
  - Have at least 3 sprites. All of which move, bounce, fall, etc. 10 pts.
  - Edit at least one of the sprites in some way to make it your own. 10 pts.
  - Make some or all sprites move with the use of certain keys. 15 pts.
  - Create or use a given background on your game. 10 pts.
  - Incorporate sound into your game. 10 pts.
  - Use a counter or score keeper in your game. 15 pts.
  - Must include a forever loop, show, hide, and “when I receive.” 30 pts.

### **Network Technologies Pracice purpose- HTML Scripting**

1. Write HTML script to demonstrate tags-doctype, html, head, title, body,P,h1 to h6
2. Write HTML script to demonstrate text formatting tags- styles, b, i, strong, small , em ,mark, del, ins, sub,sup
3. Write HTML script to demonstrate quotations and comments tages- !-, q, black quote
4. Write HTML script to demonstrate RGB , HSL RGBA &HSLA colours, values of colours,
5. Write HTML script to demonstrate Cascading style sheets –inline css, internal css, external css, css fonts, css border, css padding, css margin, id attribute, class attribute
6. Write HTML script to demonstrate hyper links, local links, using href tag along with target attribute and its values, image links, book marks, external paths
7. Write HTML script to demonstrate image tag with src, alt,width,height,styles,map tag, area tag with attributes, background image,, picture tags
8. Write HTML script to demonstrate Tables using tags table,td,th, tr,types of borders border spaces,, cell padding,left align headings,cells span may rows and columns, styles
9. Write HTML script to demonstrate lsits using tags ul,ol,li,dt,dl,dd, styles of lists, types of lists
10. Write HTML script to demonstrate HTM Blocks using tags div, span,classes with syles
11. HTML Frames using tags Frameset, Frame with attributes.
12. HTML Forms using tags form, input (all inpu types), action, target, method, name attributes, and fieldset tag.