**HTML Basics Theory**

**1.Define HTML. What is the purpose of HTML in web development?**

**Ans.** HTML (Hyper Text Markup Language) is the standard language used to create and structure web pages. It defines the elements of a webpage, such as headings, paragraphs, images, links, and multimedia content.

**Structuring Web Content** – Defines headings, paragraphs, lists, tables, and more.  
**Creating Links (Hypertext)** – Connects webpages using <a> tags.  
**Embedding Media** – Supports images, videos, and audio using <img>, <video>, and <audio>.  
**Forms & User Input** – Enables user interactions via <form>, <input>, and <button>.  
**SEO & Accessibility** – Uses semantic elements (<header>, <nav>, <article>) to improve search engine ranking and accessibility.

**2.Explain the basic structure of an HTML document. Identify the mandatory tags and their purposes.**

**Ans.**

**1) <!DOCTYPE html> (Document Type Declaration)**

* The first line of an HTML document.
* Defines the document as HTML5.
* Helps browsers correctly interpret the page.

**2)** **<html> (Root Element)**

* The **main container** for all HTML content.
* Everything inside an HTML document is wrapped inside <html>.

**3) <head> (Metadata Section)**

* Contains important information about the page but does not display on the webpage.
* Includes meta tags, styles, and links to external files.\

**4) <body> (Visible Content)**

* Contains all the visible elements like text, images, links, buttons, etc.

**3.What is the difference between block-level elements and inline elements in HTML? Provide examples of each.**

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| **Feature** | **Block-Level Elements** | **Inline Elements** |
| **Definition** | Elements that start on a new line and take up the full width available | Elements that do not start on a new line and take up only as much width as necessary. |
| **Layout Behavior** | Stretches to fill the entire width of the parent container. | Stays within the flow of surrounding text or content. |
| **Usage** | Used for structural components like headings, paragraphs, divs, and sections. | Used for styling or linking within a text like spans, links, and bold/italic text. |
| **Can Contain Other Elements?** | Yes, block elements can contain both block and inline elements. | No, inline elements can only contain other inline elements (except for some special cases). |

**Ans.**

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**4. Discuss the role of semantic HTML. Why is it important for accessibility and SEO? Provide examples of semantic elements.**

**Ans.** Semantic HTML refers to using HTML elements that convey meaning about their content. Instead of using generic <div> and <span> tags, semantic elements like <header>, <article>, and <footer> provide a clear structure to the webpage.

**1. Improves Accessibility (A11Y)**

* Screen readers and assistive technologies rely on semantic elements to understand the content.
* Example: <nav> helps visually impaired users recognize a navigation menu.

**2. Enhances SEO (Search Engine Optimization)**

* Search engines like Google use semantic HTML to better index and rank pages.
* Example: <article> signals important content, helping search engines prioritize it.

**3. Improves Code Readability & Maintainability**

* Developers can understand the structure of a webpage without needing extra comments or CSS classes.
* Example: <aside> clearly indicates sidebar content instead of using a generic <div>.

**5.What are HTML forms used for? Describe the purpose of the input, textarea, select, and button elements.**

**Ans.**

**6.Explain the difference between the GET and POST methods in form submission. When should each be used?**

**Ans.**

**7.What is the purpose of the label element in a form, and how does it improve accessibility?**

**Ans.**