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

HTML **:**

* HTML (HyperText Markup Language) is the standard language used to create and structure content on the web.
* It uses a system of tags to organize text, images, links, and other elements, telling web browsers how to display them on a webpage.
* In other words, HTML is the skeleton of a webpage.

Purpose of HTML :

* The purpose of HTML in web development is to create the basic structure and layout of a webpage.
* It organizes content like text, images, links, and videos so that web browsers can display them correctly.  
  HTML also helps connect a webpage with other technologies like CSS (for styling) and JavaScript (for interactivity).
* without HTML, a website wouldn't have any visible or organized content.

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

* An HTML (HyperText Markup Language) document provides the structure for web pages. It consists of elements enclosed in tags that define content, layout, and interaction. Here’s the basic structure:

*<!DOCTYPE html>*

*<html>*

*<head>*

*<title>Page Title</title>*

*</head>*

*<body>*

*<h1>Heading</h1>*

*<p>This is a paragraph.</p>*

*</body>*

*</html>*

Mandatory Tags and Their Purposes:

1. <!DOCTYPE html> – Defines the document type and version of HTML (HTML5 in this case).
2. <html> – The root element, encapsulating all content.
3. <head> – Contains metadata, links to stylesheets, scripts, and the page title.
4. <title> – Sets the page title, visible in the browser tab.
5. <body> – Holds the main content displayed on the webpage.

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

| Feature | Block-level Elements | Inline Elements |
| --- | --- | --- |
| Line Behavior | Start on a new line | Stay within the same line |
| Width | Takes up full width available | Takes up only as much width as needed |
| Purpose | Structure larger sections of content | Style or organize small parts of content |
| Common Examples | <div>, <p>, <h1>, <section>, <ul>, <li> | <span>, <a>, <img>, <strong>, <em> |

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

**Role of Semantic HTML**

* Semantic HTML refers to the use of HTML elements that convey meaning about the content they contain. Instead of relying on <div> or <span> for structure, semantic elements describe the purpose of the content, making it clearer for both developers and search engines.

**Importance for Accessibility**

1. **Improves Screen Reader Navigation** – Assistive technologies can interpret semantic elements like <nav>, <article>, and <aside> to enhance navigation for users with disabilities.
2. **Enhances Readability** – Clearly structured content allows users to understand the page layout and find important sections more easily.
3. **Promotes Better Keyboard Navigation** – Semantic elements help users move between sections using keyboard shortcuts.

**Importance for SEO (Search Engine Optimization)**

1. **Better Indexing** – Search engines prioritize well-structured content, improving rankings.
2. **Rich Snippets & Improved SERP Appearance** – Semantic tags enhance search result listings by helping search engines understand context.
3. **Mobile & Voice Search Optimization** – Structured content boosts discoverability on voice-based searches.

**Examples of Semantic HTML Elements**

| **Element** | **Purpose** |
| --- | --- |
| <header> | Defines the page header or a section’s introductory content. |
| <nav> | Contains navigational links. |
| <article> | Represents independent content such as blog posts or news articles. |
| <section> | Groups related content within a page. |
| <aside> | Contains additional information, like a sidebar. |
| <footer> | Defines footer content at the bottom of a page. |