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

- **HTML (Hypertext Markup Language)** is the standard language used to create web pages.
  - It is a **markup language**, not a programming language.
  - HTML uses **tags and elements** to describe how text, images, links, audio, and video should appear in a web browser.
  - It forms the **basic structure** of any website.

- **Purpose of HTML in Web Development:**
  - **Provides Structure** – HTML gives the basic skeleton of a webpage using headings, paragraphs, lists, tables, and sections.
  - **Displays Content** – It helps to insert and display text, images, audio, video, and other multimedia elements.
  - **Creates Links** – HTML allows adding hyperlinks to connect one webpage with another, forming the World Wide Web.
  - **Forms and Input** – It is used to create forms, buttons, and input fields for collecting user data.
  - **Supports Multimedia** – HTML allows embedding of media like pictures, music, and videos to make websites attractive.
  - **Foundation for CSS and JavaScript** – HTML provides structure, while CSS adds design and JavaScript adds interactivity.
  - **Cross-Browser Compatibility** – HTML is supported by all browsers, so web pages can be viewed anywhere.

- **HTML is the backbone of any website, giving it structure and meaning.**

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

➢ **Basic Structure of an HTML Document**

An HTML document is like a skeleton of any webpage. It defines how the browser should display the content (text, images, links, etc.) and how the page is structured.

1. <!DOCTYPE html>

- It tells the browser what version of HTML is being used.
- Must always be written at the top.

2. <html> ... </html>

- All other tags are written inside it.
- Represents the start and end of an HTML page.

3. <head> ... </head>

- Contains **information about the webpage** (not directly visible to users).
- Includes metadata, title, links to CSS, and JavaScript files.
- Important tag inside it:
  - **<title>** → Defines the title of the page (appears on the browser tab).

4. <body> ... </body>

- Contains all the **visible content** of the webpage.
- Everything the user sees (text, images, tables, forms, buttons, links, etc.) goes inside this section.

➢ **Example HTML Structure:**

```
<!DOCTYPE html>
<html lang="en">
<head>
```

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-
scale=1.0">
<title>Document</title>
</head>
<body>
</body>
</html>
```

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

➢ Difference Between Block-level Elements and Inline Elements in HTML

1. Block-level Elements

- They **start on a new line** and take up the **full 100% width** of the page or container by default.
- Used to create larger structures or sections in a webpage (like paragraphs, headings, divs).
- You can put **inline elements** inside block elements.

Examples:

- → A generic container
- <p> → Paragraph
- <h1> ... <h6> → Headings
- , <ol>, <li> → Lists
- <section>, <article>

2. Inline Elements

- They **do not start on a new line**; instead, they appear **within the same line** as other content.
- They only take as much width as their content requires.
- Used for formatting text or small portions of a page.

Examples:

- → Generic inline container
- <a> → Hyperlink
- <b>, <i>, <u> → Bold, Italic, Underline
- <img> → Image
- ,

Example Code:

```
<!DOCTYPE html>
<html>
<body>

<!-- Block-level Example -->

<h1>This is a block element (heading)</h1>
<p>This is a block element (paragraph)</p>

<!-- Inline Example -->

<p>This is a <b>bold</b> word inside a paragraph.</p>
<p>Here is a <a href="#">link</a> inside text.</p>

</body>
</html>
```

→ **Question 4:**

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

- Semantic HTML means using HTML tags that **describe the meaning and purpose** of the content, rather than just how it looks.
- For example:
  - <b> makes text bold (not semantic).
  - also makes text bold **but tells the browser "this is important text"** (semantic).
  - Semantic HTML = **Meaningful tags.**
  - It helps **users (accessibility)** + **Google (SEO)** + **developers (clean code)**.

- Why is Semantic HTML Important?

1. Accessibility (for screen readers & users with disabilities)

- Screen readers can understand the page better.
- Example: <nav> tells assistive tools "This is the navigation menu."
- Helps people using voice commands, braille devices, or other assistive tech.

2. SEO (Search Engine Optimization)

- Search engines like Google use semantic tags to understand content.
- Example: <article> tells Google, "This is the main article of the page."
- Better structure improves **search ranking** and visibility.

3. Developer & Maintenance Benefits

- Code becomes easier to read and maintain.
- Other developers instantly know what a section is about.

Examples of Semantic Elements:

- <header> → Represents the top section of a page or article (logo, navigation, title).
- <nav> → Contains navigation links.
- <main> → Defines the main content of the page.

- <article> → Represents a self-contained piece of content (like a blog post).
- <section> → Groups related content together.
- <aside> → Side content, like ads or sidebars.
- <footer> → Bottom section of the page (contact info, copyright).
- <figure> & <caption> → Image with a caption.

- **Example Code**

```
<!DOCTYPE html>
<html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Semantic HTML Example</title>
</head>

<body>

<header>
  <h1>My Blog</h1>
  <nav>
    <a href="#">Home</a> | <a href="#">Articles</a> | <a href="#">Contact</a>
  </nav>
</header>

<main>
  <article>
    <h2>Role of Semantic HTML</h2>
    <p>Semantic HTML makes web content meaningful and accessible.</p>
  </article>
</main>

<aside>
  <p>Related Links</p>
```

```
</aside>

<footer>
  <p>&copy; 2025 My Blog</p>
</footer>

</body>
</html>
```