Q1. Define HTML. What is the purpose of HTML in web development?

Ans: HTML (HyperText Markup Language) is the standard language used to create and design web pages. It defines the structure and layout of a webpage using various tags and elements. HTML is not a programming language but a markup language that tells the browser how to display text, images, links, and other content.

The purpose of HTML in web development is to provide the basic structure of a website. It organizes the content so that browsers can display it correctly. HTML works together with CSS for styling and JavaScript for interactivity, making it the foundation of every webpage.

Q2. Explain the basic structure of an HTML document. Identify the mandatory tagsand their purposes.

Ans: An HTML document is made up of various tags that define how the content of a webpage is displayed in a web browser. Every HTML page follows a specific structure that starts with a doctype declaration and contains several main sections such as the head and body.

Example:-

```
<!DOCTYPE html>
<html>
  <head>
    <title>Document</title>
  </head>
  <body>
    <h1> This is a sample HTML page </h1>
  </body>
</html>
```

Mandatory Tags and Their Purposes:

1. **<!DOCTYPE html>** – Declares the document type and version of HTML. It helps the browser understand that the page is written in HTML5.
2. **<html>** – The root tag that contains all the content of the webpage.
3. **<head>** – Contains metadata about the webpage such as title, styles, and links to external files.

4. <title> – Defines the title of the webpage, which appears on the browser tab.
5. <body> – Contains all the visible content of the webpage such as text, images, links, and tables.

Q3. What is the difference between block-level elements and inline elements in HTML? Provide examples of each.

Ans: In HTML, elements are mainly divided into block-level and inline elements based on how they display content on a webpage.

Block-level elements always start on a new line and take up the full width available. They are used to create larger structures or sections of a webpage, such as paragraphs, headings, or divisions.
Inline elements, on the other hand, do not start on a new line. They only take up as much width as necessary and are used to format smaller pieces of content within a block, such as text or links.

Feature	**Block-Level Elements**	**Inline Elements**
Display	Start on a new line and occupy full width.	Do not start on a new line and occupy only the required space.
Used For	Structuring larger sections of the page.	Formatting small parts within a block.
Example Tags	, <p>, <h1>–<h6>, , , <table>, <form>	, <a>, <img>, <b>, <i>, ,

Q4. Discuss the role of semantic HTML. Why is it important for accessibility and SEO? Provide examples of semantic elements.

Ans: Semantic HTML refers to the use of HTML tags that clearly describe the meaning and purpose of the content they contain. Instead of using non-descriptive tags like or everywhere, semantic HTML uses meaningful tags such as <header>, <footer>, <article>, and <section> to structure a webpage in a more understandable way.

Importance for Accessibility and SEO

1. Accessibility:
   Semantic HTML helps screen readers and assistive technologies understand the

structure and content of a webpage. This makes websites more accessible for users with disabilities by providing better navigation and context.

2. SEO (Search Engine Optimization):
   Search engines like Google use semantic tags to understand webpage content more accurately. Proper use of semantic elements improves search visibility and ranking because it clearly defines headings, articles, and important sections of the page.

Examples of Semantic Elements

- <header> – Defines the top section or header of a webpage.
- <footer> – Defines the bottom section or footer of a webpage.
- <article> – Represents a self-contained piece of content such as a blog post or news article.
- <section> – Groups related content together.
- <nav> – Defines a navigation menu or group of links.
- <aside> – Contains side content such as advertisements or sidebars.
- <main> – Represents the main content area of the webpage.