1. What is HTML?

Answer:
HTML (Hypertext Markup Language) is the standard language used to create and design webpages. It provides the structure for web content by using a series of elements or tags to define headings, paragraphs, links, images, and other content types. HTML forms the skeleton of most web pages and is usually combined with CSS for styling and JavaScript for interactivity.

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2. What is the difference between HTML tags and ?

Answer:

- : A block-level element that is used to group larger content sections like paragraphs, images, and other block elements. It starts on a new line and takes up the full width available.
- : An inline element that is used for grouping small chunks of text or other inline elements. It does not start on a new line and only takes up as much width as its content.

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3. What is the purpose of the alt attribute in images?

Answer:
The alt attribute provides alternative text for an image if the image cannot be displayed. It is important for accessibility purposes, as screen readers can read the alt text to visually impaired users. Additionally, it improves SEO and ensures that users with slow internet connections can still understand the context of the image.

Example:

html

Copy code

<img src="image.jpg" alt="A cat sitting on a chair">

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4. What are semantic HTML tags? Give examples.

Answer:
Semantic HTML tags clearly describe their meaning in a human- and machine-readable way. They help with accessibility, SEO, and code readability. Unlike generic tags like or , semantic tags carry meaning about the content they enclose.

Examples of semantic tags include:

- <header>: Represents the header of a section or page.
- <footer>: Represents the footer of a section or page.
- <article>: Represents a self-contained piece of content, like a blog post.
- <section>: Represents a section of content, typically with a heading.

- <nav>: Defines a navigation block.
- <aside>: Represents content tangentially related to the main content (like a sidebar).

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5. What is the difference between id and class attributes in HTML?

Answer:

- **id**: The id attribute is used to identify a single, unique element in a page. It must be unique within a document and is often used for styling or JavaScript manipulation.
- **class**: The class attribute is used to group multiple elements together. Elements with the same class can share the same styling or behavior. Multiple elements can have the same class name.

Example:

html

Copy code

Header content

First content section

Second content section

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6. What is the difference between inline and block elements in HTML?

Answer:

- **inline elements**: These elements do not start on a new line and only take up as much width as necessary. They flow within the content. Examples include , <a>, and .
- **block elements**: These elements take up the full width of their container, starting on a new line. Examples include , <p>, and <h1>.

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7. What are forms in HTML and how are they created?

Answer:
Forms are used to collect user input. They are created using the <form> element. Inside the form, you can use various input elements such as text fields, radio buttons, checkboxes, and buttons. A form typically includes an action (URL to send data to) and a method (usually GET or POST).

Example:

html

Copy code

<form action="/submit-form" method="POST">

<label for="name">Name:</label>

```
  <input type="text" id="name" name="name">
  <input type="submit" value="Submit">
</form>
```

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8. What are the new input types introduced in HTML5?

Answer:
HTML5 introduced several new input types that make forms more interactive and user-friendly. Some of these include:

- email: For email addresses.
- tel: For telephone numbers.
- url: For URLs.
- date: For date input.
- range: For a numeric range input.
- number: For numeric input (with validation).
- search: For search fields.
- color: For color picker input.

Example:

html

Copy code

```
<input type="email" placeholder="Enter your email">
<input type="date" placeholder="Pick a date">
```

---

9. What is the purpose of the <meta> tag in HTML?

Answer:
The <meta> tag provides metadata about the HTML document, such as the character set, author, description, and viewport settings for mobile devices. These tags are placed in the <head> section of the HTML document and are not displayed on the page.

Examples:

html

Copy code

```
<meta charset="UTF-8">
<meta name="description" content="A sample webpage">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

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10. What is the use of the viewport meta tag in responsive design?

Answer:
The viewport meta tag controls the layout of the page on mobile devices. It is essential for responsive web design to ensure that the webpage scales correctly on different screen sizes. The content attribute usually contains values like width=device-width and initial-scale=1.0.

Example:

html

Copy code

<meta name="viewport" content="width=device-width, initial-scale=1.0">

This ensures the page's width matches the screen's width, and sets the initial zoom level to 1.

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11. What is the purpose of the DOCTYPE declaration?

Answer:
The DOCTYPE declaration is used to specify the document type and version of HTML being used. It helps the browser to render the document in the correct mode. In modern HTML, the declaration <!DOCTYPE html> is used to specify HTML5.

Example:

html

Copy code

<!DOCTYPE html>

This should be the first line in an HTML document.

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12. What are HTML entities?

Answer:
HTML entities are used to represent special characters that have a specific meaning in HTML or could be misinterpreted by the browser. These entities begin with & and end with ;. For example:

- < for < (less than)
- > for > (greater than)
- & for & (ampersand)
- " for " (double quote)

Example:

html

Copy code

The symbol for less than is <

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13. What is the difference between <script> and <noscript> tags in HTML?

Answer:

- <script>: This tag is used to embed or reference JavaScript within an HTML document. It can be placed in the <head> or <body> section.
- <noscript>: This tag contains content that will be displayed if the user's browser does not support JavaScript or has it disabled. It is typically used for providing alternative content.

Example:

html

Copy code

<script>

console.log("JavaScript is enabled");

</script>

<noscript>

Your browser does not support JavaScript!

</noscript>

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14. What is the viewport meta tag?

Answer:
The viewport meta tag controls the layout of the page on mobile devices. It is essential for responsive web design to ensure that the webpage scales correctly on different screen sizes.

Example:

html

Copy code

<meta name="viewport" content="width=device-width, initial-scale=1.0">

---

15. What is the <iframe> tag used for in HTML?

Answer:
The <iframe> tag is used to embed another HTML document within the current document

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16. What is the meta charset="UTF-8" tag used for?

Answer:
The meta charset="UTF-8" tag specifies the character encoding for the HTML document, ensuring that characters are displayed correctly (including special characters).

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17. What is the <audio> tag in HTML5?

Answer:
The <audio> tag is used to embed audio files in a webpage. It supports multiple file formats like MP3, Ogg, and WAV.

Example:

html

Copy code

```
<audio controls>
  <source src="audio.mp3" type="audio/mp3">
  Your browser does not support the audio element.
</audio>
```

---

18. What is the <video> tag in HTML5?

Answer:
The <video> tag is used to embed video content in a webpage. It supports formats like MP4, WebM, and Ogg.

Example:

html

Copy code

```
<video width="320" height="240" controls>
  <source src="movie.mp4" type="video/mp4">
  Your browser does not support the video tag.
</video>
```

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19. What is the difference between and ?

Answer:

- ** **: A block-level element used to group larger sections of content.
- ****: An inline element used to group small pieces of content, like text.

20. What is the purpose of the `<form>` tag?

- **Answer:**
  The `<form>` tag is used to create an HTML form that allows users to enter data, which can be sent to a server for processing.

21. What is the difference between GET and POST methods in a form?

Answer:

- **GET**: Sends form data as URL parameters. Suitable for retrieving data.
- **POST**: Sends form data in the body of the request. Suitable for sending sensitive or large data.

22. Explain the difference between block-level and inline elements.

Answer:

- **Block-level elements**: These elements start on a new line and take up the full width available, e.g., , <p>, <header>.
- **Inline elements**: These elements do not start on a new line and only take up as much width as necessary, e.g., , <a>, .