**WD-HTML-5**

**Q-1** **What are the new tags added in HTML5?**

**Ans:-**

1. <article>: Represents a self-contained piece of content that could be distributed and reused independently, such as a news article or blog post.
2. <section>: Defines a section in a document, grouping together related content. It's often used to structure the document into chapters, headings, or thematic grouping.
3. <nav>: Specifies a navigation menu, typically containing links to other pages or sections within the website.
4. <header>: Represents the header of a section or page and can contain headings, subheadings, and other header-related content.
5. <footer>: Defines the footer of a section or page, often containing metadata, copyright information, or links to related documents.
6. <aside>: Represents content that is tangentially related to the content around it, such as a sidebar or pull quote.
7. <figure> and <figcaption>: Used together to embed images, illustrations, diagrams, or other media content along with a caption.
8. <main>: Represents the main content of the document, excluding headers, footers, and sidebars.
9. <mark>: Highlights or marks parts of the text for reference or to emphasize certain sections.
10. <progress>: Creates a progress bar, allowing developers to show the completion progress of a task.
11. <time>: Represents a specific period in time and can be used to encode dates, times, or both.
12. <meter>: Represents a scalar measurement within a known range, such as disk usage, completion percentage, etc.

**Q-2**  **How to embed audio and video in a webpage?**

**Ans:-**

* To embed audio and video in a webpage, you can use the <audio> and <video> elements introduced in HTML5. Here's a basic guide on how to use them:

**Example:-**

### **Embedding Audio:**

**<audio controls>**

**<source src="audio-file.mp3" type="audio/mp3">**

**Your browser does not support the audio element.**

**</audio>**

* The controls attribute adds play, pause, and volume controls to the audio player.
* The <source> element specifies the source file and its type. You can provide multiple <source> elements with different file formats for better browser compatibility.

### **Embedding Video:**

<video width="600" height="400" controls>

<source src="video-file.mp4" type="video/mp4">

Your browser does not support the video element.

</video>

* Similar to <audio>, the controls attribute adds play, pause, and volume controls to the video player.
* The <source> element specifies the source file and its type. As with audio, you can provide multiple source elements with different file formats.

### **Additional Attributes:**

* **width and height**: You can set the width and height attributes to define the dimensions of the video player.
* **autoplay**: If you want the audio or video to start playing automatically when the page loads, you can add the autoplay attribute. However, note that autoplaying media can be disruptive and is often discouraged.
* **loop**: To make the media loop continuously, you can add the loop attribute.
* **poster**: You can use the poster attribute to specify an image to be displayed as the video's thumbnail before it starts playing.

### **Example with Additional Attributes:**

**Example:-**

**<video width="600" height="400" controls autoplay loop poster="video-thumbnail.jpg">**

**<source src="video-file.mp4" type="video/mp4">**

**Your browser does not support the video element.**

**</video>**

**Q-3**  **Semantic element in HTML5?**

**Ans:-**

## **Semantic Elements in HTML**

Many web sites contain HTML code like: <div id="nav"> <div class="header"> <div id="footer"> to indicate navigation, header, and footer.

In HTML there are some semantic elements that can be used to define different parts of a web page:

* <article>
* <aside>
* <details>
* <figcaption>
* <figure>
* <footer>
* <header>
* <main>
* <mark>
* <nav>
* <section>
* <summary>
* <time>



**Q-4**  **Canvas and SVG tags**

**Ans:-**

* Both <canvas> and <svg> are HTML tags that allow you to create graphics on a web page, but they have different approaches and use cases.

### **<canvas> Tag:**

* The <canvas> element is a bitmap-based drawing surface introduced in HTML5. It provides a pixel-based rendering context where you can draw shapes, images, and animations using JavaScript. The content rendered on the canvas is not part of the document's DOM, making it suitable for dynamic and interactive graphics**.**

**Example:-**

**<canvas id="myCanvas" width="400" height="200"></canvas>**

**<script>**

**var canvas = document.getElementById('myCanvas');**

**var context = canvas.getContext('2d');**

**// Drawing a rectangle**

**context.fillStyle = 'green';**

**context.fillRect(50, 50, 100, 50);**

**</script>**

### **<svg> Tag:**

The <svg> element is a vector-based drawing language that defines graphics using XML syntax. SVG is scalable, and its content is part of the document's DOM, making it easier to manipulate using CSS and JavaScript. SVG is well-suited for static graphics, diagrams, and illustrations.

Example:-

**<svg width="400" height="200">**

**<rect x="50" y="50" width="100" height="50" fill="blue" /></svg>**