**Module 5) HTML5**

**Q1- What are the new tags added in HTML5?**

**Ans-** HTML5 introduced several new tags to improve the structure and semantics of web documents. Some of the new tags include:

|  |  |
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| **Tag** | **Description** |
| <article> | This element is used to define an independent piece of content in a document, that may be a blog, a magazine or a newspaper article. |
| <aside> | It specifies that article is slightly related to the rest of the whole page. |
| <audio> | It is used to play audio file in HTML. |
| <bdi> | The bdi stands for bi-directional isolation. It isolates a part of text that is formatted in other direction from the outside text document. |
| <canvas> | It is used to draw canvas. |
| <data> | It provides machine readable version of its data. |
| <datalist> | It provides auto complete feature for textfield. |
| <details> | It specifies the additional information or controls required by user. |
| <dialog> | It defines a window or a dialog box. |
| <figcaption> | It is used to define a caption for a <figure> element. |
| <figure> | It defines a self-contained content like photos, diagrams etc. |
| <footer> | It defines a footer for a section. |
| <header> | It defines a header for a section. |
| <main> | It defines the main content of a document. |
| <mark> | It specifies the marked or highlighted content. |
| <menuitem> | It defines a command that the user can invoke from a popup menu. |
| <meter> | It is used to measure the scalar value within a given range. |
| <nav> | It is used to define the navigation link in the document. |
| <progress> | It specifies the progress of the task. |
| <rp> | It defines what to show in browser that don't support ruby annotation. |
| <rt> | It defines an explanation/pronunciation of characters. |
| <ruby> | It defines ruby annotation along with <rp> and <rt>. |
| <section> | It defines a section in the document. |
| <summary> | It specifies a visible heading for <detailed> element. |
| <svg> | It is used to display shapes. |
| <time> | It is used to define a date/time. |
| <video> | It is used to play video file in HTML. |
| <wbr> | It defines a possible line break. |

**Q2- How to embed audio and video in a webpage?**

**Ans-** HTML5 introduced the <audio> and <video> elements to embed audio and video content directly into webpages without the need for external plugins like Flash. Here's how you can use them:

**For audio:**

<audio controls>

<source src="path/to/audio.mp3" type="audio/mpeg">

</audio>

**For video:**

<video controls width="640" height="360">

<source src="path/to/video.mp4" type="video/mp4">

</video>

In the above examples, the controls attribute adds playback controls (play, pause, volume, etc.) to the audio and video elements. The <source> element allows you to specify multiple sources for the media, in case the browser doesn't support the specified format.

**Q3- Semantic element in HTML5?**

**Ans-** HTML5 introduced several semantic elements to give better meaning and structure to web documents. These elements help search engines and screen readers better understand the content. Some of the semantic elements include:

<header>: Represents the header section of a document or a section.

<footer>: Represents the footer section of a document or a section.

<nav>: Represents a navigation menu.

<section>: Defines a section within a document.

<article>: Represents an independent piece of content that could be distributed and reused independently.

<aside>: Represents content that is tangentially related to the content around it, like a sidebar.

<main>: Represents the main content of a document and should be unique to the document.

<figure>: Represents any content that is referenced from the main content, like images or illustrations.

<figcaption>: Represents a caption or legend for a <figure> element.

<time>: Represents a specific time or a range of time.

<progress>: Represents the progress of a task, like loading or downloading.

**Q4- Canvas and SVG tags**

**Ans-** Both <canvas> and <svg> are used for graphics in HTML5, but they have different approaches and use cases:

**<canvas>:** The <canvas> element provides a bitmap-based drawing surface using JavaScript. It allows you to draw and manipulate graphics using JavaScript APIs. This means that graphics drawn on a <canvas> are not part of the document's DOM and are not directly accessible by screen readers or search engines. It is commonly used for animations, games, and custom graphics.

**Example:**

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

**<svg>:** The <svg> element defines vector-based graphics using XML syntax. It creates scalable and resolution-independent graphics, meaning they will look crisp at any size. Since SVG elements are part of the DOM, they are accessible to screen readers and search engines, making it suitable for accessible graphics, icons, and illustrations.

**Example:**

<svg width="100" height="100">

<circle cx="50" cy="50" r="40" fill="blue" />

</svg>

In summary, use <canvas> when you need to draw graphics programmatically using JavaScript, and use <svg> when you want resolution-independent vector graphics that can be easily styled and accessible.