Frontend Assignment
Module - HTML5

1) What are the new tags added in HTML5?

Ans.

HTML5 introduced several new tags compared to previous versions of HTML. Here are some of the notable new tags added in HTML5:

1. <header>: Represents the introductory content or a container for a set of navigational links in a document or a section.
2. <nav>: Defines a section of navigation links within a document.
3. <section>: Defines a standalone section within a document.
4. <article>: Represents a self-contained composition that can be independently distributed or syndicated.
5. <aside>: Defines content that is tangentially related to the surrounding content, such as sidebars or pull quotes.
6. <footer>: Represents the footer of a document or a section.
7. <main>: Specifies the main content of a document. There should be only one <main> element per page.
8. <figure>: Represents a figure or a group of figures that are referenced in the main content of the document.
9. <figcaption>: Provides a caption or description for the content within a <figure> element.
10. <video>: Embeds video content into an HTML document.
11. <audio>: Embeds audio content into an HTML document.
12. <canvas>: Provides a drawing surface for graphics and animations using JavaScript.
13. <progress>: Represents the progress of a task or process.
14. <meter>: Displays a scalar measurement within a known range.
15. <datalist>: Specifies a list of pre-defined options for input controls such as <input> or <select>.
16. <output>: Represents the result of a calculation or user action.
17. <time>: Specifies a date, time, or duration.
18. <mark>: Highlights or marks a specific section of text.

19. <details>: Represents a disclosure widget from which the user can obtain additional information or controls.

20. <summary>: Specifies a summary, caption, or legend for a <details> element.

These are just some of the new tags introduced in HTML5. HTML5 also introduced various attributes and APIs that enhance the functionality and capabilities of web pages.

2) How to embed audio and video in a webpage?

Ans.
To embed audio and video in a webpage using HTML5, you can use the <audio> and <video> tags, respectively. Here's how you can use these tags:

Embedding Audio:

Place the audio file (e.g., MP3, WAV) in the appropriate location on your web server.
Use the <audio> tag to specify the source file and any additional attributes.
Here's a basic example:

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

Embedding Video:

Place the video file (e.g., MP4, WebM) in the appropriate location on your web server.
Use the <video> tag to specify the source file and any additional attributes.
Here's a basic example:

```
<video controls>
  <source src="videofile.mp4" type="video/mp4">
  Your browser does not support the video tag.
</video>
```

3) Semantic element in HTML5?

Ans.

Semantic elements in HTML5 are tags that provide meaning and structure to the content within a webpage. These elements have specific semantic roles, making the HTML code more descriptive and improving accessibility. Here are some of the commonly used semantic elements in HTML5:

<header>: Represents the introductory content or a container for a set of navigational links in a document or a section.

<nav>: Defines a section of navigation links within a document.

<main>: Specifies the main content of a document. There should be only one <main> element per page.

<section>: Defines a standalone section within a document.

<article>: Represents a self-contained composition that can be independently distributed or syndicated.

<aside>: Defines content that is tangentially related to the surrounding content, such as sidebars or pull quotes.

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

<figure>: Represents a figure or a group of figures that are referenced in the main content of the document.

<figcaption>: Provides a caption or description for the content within a <figure> element.

<time>: Specifies a date, time, or duration.

<mark>: Highlights or marks a specific section of text.

<details>: Represents a disclosure widget from which the user can obtain additional information or controls.

<summary>: Specifies a summary, caption, or legend for a <details> element.

These semantic elements help define the structure and purpose of the content, making it more meaningful for both humans and search engines. They also assist assistive technologies in understanding and navigating the webpage, improving accessibility for users with disabilities.

4) What is Canvas and SVG tags?

Ans.

Canvas:

The HTML <canvas> element is used to draw graphics on a web page. The <canvas> element is only a container for graphics. You must use JavaScript to actually draw the graphics. Canvas has several methods for drawing paths, boxes, circles, text, and adding images.
A canvas is a rectangular area on an HTML page. By default, a canvas has no border and no content. After creating the rectangular canvas area, you must add a JavaScript to do the drawing.

Example:

```
<canvas id="myCanvas" width="200" height="100"></canvas>
```

SVG tags:

SVG stands for Scalable Vector Graphics. SVG is used to define graphics for the Web. SVG is a W3C recommendation. The HTML <svg> element is a container for SVG graphics. SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

Example:

```
<svg width="100" height="100">
<circle cx="50" cy="50" r="40" stroke="green" stroke-width="4" fill="yellow" />
</svg>
```