MODULE: 3 (HTML 5)

1. **What are the new tags added in HTML5?**

**→** (MOVED) [article](https://www.w3.org/wiki/HTML/Elements/article), (MOVED) [aside](https://www.w3.org/wiki/HTML/Elements/aside), [audio](https://www.w3.org/wiki/HTML/Elements/audio), [canvas](https://www.w3.org/wiki/HTML/Elements/canvas), [command](https://www.w3.org/wiki/HTML/Elements/command), [datalist](https://www.w3.org/wiki/HTML/Elements/datalist), [details](https://www.w3.org/wiki/HTML/Elements/details), [embed](https://www.w3.org/wiki/HTML/Elements/embed), [figcaption](https://www.w3.org/wiki/HTML/Elements/figcaption), [figure](https://www.w3.org/wiki/HTML/Elements/figure), [footer](https://www.w3.org/wiki/HTML/Elements/footer), [header](https://www.w3.org/wiki/HTML/Elements/header), [hgroup](https://www.w3.org/wiki/HTML/Elements/hgroup), [keygen](https://www.w3.org/wiki/HTML/Elements/keygen), [mark](https://www.w3.org/wiki/HTML/Elements/mark), [math](https://www.w3.org/wiki/HTML/Elements/math), [meter](https://www.w3.org/wiki/HTML/Elements/meter), [nav](https://www.w3.org/wiki/HTML/Elements/nav), [output](https://www.w3.org/wiki/HTML/Elements/output), [progress](https://www.w3.org/wiki/HTML/Elements/progress), [rp](https://www.w3.org/wiki/HTML/Elements/rp), [rt](https://www.w3.org/wiki/HTML/Elements/rt), [ruby](https://www.w3.org/wiki/HTML/Elements/ruby), [section](https://www.w3.org/wiki/HTML/Elements/section), [source](https://www.w3.org/wiki/HTML/Elements/source), [summary](https://www.w3.org/wiki/HTML/Elements/summary), [svg](https://www.w3.org/wiki/HTML/Elements/svg), [time](https://www.w3.org/wiki/HTML/Elements/time), [track](https://www.w3.org/wiki/HTML/Elements/track), [video](https://www.w3.org/wiki/HTML/Elements/video), [wbr](https://www.w3.org/wiki/HTML/Elements/wbr).

1. **How to embed audio and video in a webpage?**

**→** The HTML5 <audio> and <video> tags make it simple to add media to a website. You need to set src attribute to identify the media source and include a controls attribute so the user can play and pause the media.

Embedding Audio:

<**audio** **src** = "foo.wav" **controls** **autoplay**>

Your browser does not support the <audio> element.

</**audio**>

Embedding Video:

<**video** **src** = "foo.mp4” width = "300" **height** = "200" **controls**>

Your browser does not support the <video> element.

</**video**>

1. **Semantic element in HTML5?**

**→** A semantic element clearly describes its meaning to both the browser and the developer.

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>.

1. **Canvas and SVG tags**

**→** Canvas:-

The HTML canvas element provides HTML a bitmapped surface to work with. It is used to draw graphics on the web page.

The HTML 5 <canvas> tag is used to draw graphics using scripting language like JavaScript.

The <canvas> element is only a container for graphics, you must need a scripting language to draw the graphics. The <canvas> element allows for dynamic and scriptable rendering of 2D shapes and bitmap images.

It is a low level, procedural model that updates a bitmap and does not have a built-in scene. There are several methods in canvas to draw paths, boxes, circles, text and add images.

A canvas is a rectangle like area on an HTML page. It is specified with canvas element. By default, the <canvas> element has no border and no content, it is like a container.

SVG Tag:-

The HTML SVG is an acronym which stands for Scalable Vector Graphics.

HTML SVG is a modularized language which is used to describe graphics in XML. It describe two-dimensional vector and mixed vector/raster graphics in XML. It is a W3C recommendation. SVG images and their behaviors are defined in XML text files. So as XML files, you can create and edit an SVG image with text editor, but generally drawing programs like inkspace are preferred to create it.

SVG is mostly used for vector type diagrams like pie charts, 2-Dimensional graphs in an X,Y coordinate system etc.

The <svg> element specifies the root of a SVG fragment. You can animate every element and every attribute in SVG files.

SVG images can be saved as the smallest size possible. Unlike bitmap image formats like JPG or PNG, it does not contain a fixed set of dots. So it is also easy to print with high quality at any resolution.

SVG images can be zoomed to a certain level without degradation of the picture quality.

SVG images and their behaviors are defined in XML text files, so they can be created and edited with any text editor.