**MODULE: 5 (HTML5)**

1. **What are the new tags added in HTML5?  
   A:** The following tags (elements) have been introduced in HTML5

|  |  |
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| **Tags (Elements)** | **Description** |
| <article> | Represents an independent piece of content of a document, such as a blog entry or newspaper article |
| <aside > | Represents a piece of content that is only slightly related to the rest of the page. |
| <audio> | Defines an audio file. |
| <canvas> | This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games. |
| <command> | Represents a command the user can invoke. |
| <datalist> | Together with the a new list attribute for input can be used to make comboboxes |
| <details> | Represents additional information or controls which the user can obtain on demand |
| <embed> | Defines external interactive content or plugin. |
| <figure> | Represents a piece of self-contained flow content, typically referenced as a single unit from the main flow of the document. |
| <footer> | Represents a footer for a section and can contain information about the author, copyright information, et cetera. |
| <header> | Represents a group of introductory or navigational aids. |
| <hgroup> | Represents the header of a section. |
| <keygen> | Represents control for key pair generation. |
| <mark> | Represents a run of text in one document marked or highlighted for reference purposes, due to its relevance in another context. |
| <meter> | Represents a measurement, such as disk usage. |
| <nav> | Represents a section of the document intended for navigation. |
| <output> | Represents some type of output, such as from a calculation done through scripting. |
| <progress> | Represents a completion of a task, such as downloading or when performing a series of expensive operations. |
| <ruby> | Together with <rt> and <rp> allow for marking up ruby annotations. |
| <section> | Represents a generic document or application section |
| <time> | Represents a date and/or time. |
| <video> | Defines a video file. |
| <wbr> | Represents a line break opportunity. |

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

**A:** HTML5 features include native audio and video support without the need for Flash.

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.

1. **Semantic element in HTML5?  
   A:** Elements such as <header>, <footer> and <article> are all considered semantic because they accurately describe the purpose of the element and the type of content that is inside them.

HTML was originally created as a markup language to describe documents on the early internet. As the internet grew and was adopted by more people, its needs changed.

Where the internet was originally intended for sharing scientific documents, now people wanted to share other things as well. Very quickly, people started wanting to make the web look nicer.

Because the web was not initially built to be designed, programmers used different hacks to get things laid out in different ways. Rather than using the <table></table> to describe information using a table, programmers would use them to position other elements on a page.

As the use of visually designed layouts progressed, programmers started to use a generic “non-semantic” tag like <div>. They would often give these elements a class or id attribute to describe their purpose. For example, instead of <header> this was often written as <div class="header">.As HTML5 is still relatively new, this use of non-semantic elements is still very common on websites today.

**List of new semantic elements**

The semantic elements added in HTML5 are:

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

Elements such as <header>, <nav>, <section>, <article>, <aside>, and <footer> act more or less like <div> elements. They group other elements together into page sections. However where a <div> tag could contain any type of information, it is easy to identify what sort of information would go in a semantic <header> region.

1. **Canvas and SVG tags  
   A:Difference between SVG and HTML5 Canvas:**

| **SVG** | **Canvas** |
| --- | --- |
| Vector based (composed of shapes) | Raster based (composed of pixel) |
| SVG has better scalability. So it can be printed with high quality at any resolution. | Canvas has poor scalability. Hence it is not suitable for printing on higher resolution. |
| SVG gives better performance with smaller number of objects or larger surface. | Canvas gives better performance with smaller surface or larger number of objects. |
| SVG can be modified through script and CSS. | Canvas can be modified through script only. |
| Multiple graphical elements, which become the part of the page’s DOM tree. | Single element similar to <img> in behavior. Canvas diagram can be saved to PNG or JPG format. |