**MODULE: 3 (HTML 5)**

1) What are the new tags added in HTML5?

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| The following tags (elements) have been introduced in HTML5 − | |
| **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  xpensive 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. |

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

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| => To embed audio and video in HTML, we use the <audio> tag. Before HTML5, audio cannot be added to  web pages in the Internet Explorer era. | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => To play audio and video, we used web plugins like Flash. After the release of HTML5, it is possible.  This tag supports Chrome, Firefox, Safari, Opera, and Edge in three audio formats – MP3, WAV, OGG.  Only Safari browser doesn’t support OGG audio format. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => syntax:- Audio |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <audio> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <source src="file\_name" type="audio\_file\_type"> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | </audio> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => syntax:- video |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <video width="320" height="240" controls> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <source src="movie.mp4" type="video/mp4"> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <source src="movie.ogg" type="video/ogg"> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Your browser does not support the video tag. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | </video> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

3) Semantic element in HTML5?

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| => 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> etc. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4) Canvas and SVG tags?

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| CANVAS Tag:- | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => The HTML <canvas> element is used to draw graphics, on the fly, via JavaScript. |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => 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. |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => Syntax:- Canvas Tag |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <canvas id="mycanvas" height="300px" width="300px"></canvas> |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <script> |  |  |  |  |  |  |  |  |  |  |  |  |
|  | var rect = document.getElementById("mycanvas") |  |  |  |  |  |  |  |  |  |  |  |  |
|  | var draw = rect.getContext("2d") |  |  |  |  |  |  |  |  |  |  |  |  |
|  | draw.fillStyle = "red" |  |  |  |  |  |  |  |  |  |  |  |  |
|  | draw.fillRect(10,10,100,200) |  |  |  |  |  |  |  |  |  |  |  |  |
|  | </script> |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | SVG Tag:- |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => SVG stands for Scalable Vector Graphics |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => SVG is used to define graphics for the Web is a W3C recommendation |  |  |  |  |  |  |  |  |  |  |  |  |
|  | => Syntax:- SGV Tag |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <svg width="100" height="100"> |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <circle cx="50" cy="50" r="40" stroke="green" stroke-width="4" fill="yellow" /> |  |  |  |  |  |  |  |  |  |  |  |  |
|  | </svg> |  |  |  |  |  |  |  |  |  |  |  |  |