**1) What is HTML?**

HTML is short for HyperText Markup Language and is the language of the World Wide Web. It is the standard text formatting language used for creating and displaying pages on the Web. HTML documents are made up of two things: the content and the tags that format it for proper display on pages.

**2) What are tags?**

Content is placed in between HTML tags in order to properly format it. It makes use of the less than symbol (<) and the greater than symbol (>). A slash symbol is also used as a closing tag. For example:

<strong>sample</strong>

**3) Do all HTML tags come in a pair?**

No, there are single HTML tags that do not need a closing tag. Examples are the <img> tag and <br> tags.

**4) What are some of the common lists that can be used when designing a page?**

You can insert any or a combination of the following list types:  
– ordered list  
– unordered list  
– definition list  
– menu list  
– directory list  
Each of this list types makes use of a different tag set to compose

**5) How do you insert a comment in HTML?**

Comments in HTML begins with “<!–“nd ends with “–>”. For example:

<!-- A SAMPLE COMMENT -->

**6) Do all character entities display properly on all systems?**

No, there are some character entities that cannot be displayed when the operating system that the browser is running on does not support the characters. When that happens, these characters are displayed as boxes.

**7) What is an image map?**

Image map lets you link to many different web pages using a single image. You can define shapes in images that you want to make part of an image mapping.

**8 ) What is the advantage of collapsing white space?**

White spaces are a blank sequence of space characters, which is treated as a single space character in HTML. Because the browser collapses multiple spaces into a single space, you can indent lines of text without worrying about multiple spaces. This enables you to organize the HTML code into a much more readable format.

**9) Can attribute values be set to anything or are there specific values that they accept?**

Some attribute values can be set to only predefined values. Other attributes can accept any numerical value that represents the number of pixels for a size.

**10) How do you insert a copyright symbol on a browser page?**

To insert the copyright symbol, you need to type &copy; or & #169; in an HTML file.

**11) How do you create links to sections within the same page?**

Links can be created using the <a> tag, with referencing through the use of the number (#) symbol. For example, you can have one line as <a href=”#topmost”>BACK TO TOP</a>, which would result in the words “BACK TO TOP” appearing on the webpage and links to a bookmark named topmost. You then create a separate tag command like <a name=”topmost”> somewhere on the top of the same webpage so that the user will be linked to that spot when he clicked on “BACK TO TOP”.

**12) Is there any way to keep list elements straight in an HTML file?**

By using indents, you can keep the list elements straight. If you indent each subnested list in further than the parent list that contains it, you can at a glance determine the various lists and the elements that it contains.

**13) If you see a web address on a magazine, to which web page does it point?**

Every web page on the web can have a separate web address. Most of these addresses are relative to the top-most web page. The published web address that appears within magazines typically points this top-most page. From this top level page, you can access all other pages within the website.

**14) What is the use of alternative text in image mapping?**

When you use image maps, it can easily become confusing and difficult to determine which hotspots correspond to which links. Using alternative text lets, you put a descriptive text on each hotspot link.

**15) Do older HTML files work on newer browsers?**

Yes, older HTML files are compliant to the HTML standard. Most older files work on the newer browsers, though some features may not work.

**16) Does a hyperlink apply to text only?**

No, hyperlinks can be used in the text as well as images. That means you can convert an image into a link that will allow users to link to another page when clicked. Surround the image within the <a href=” “>…</a> tag combinations.

**17) If the user’s operating system does not support the needed character, how can the symbol be represented?**

In cases wherein their operating system does not support a particular character, it is still possible to display that character by showing it as an image instead.

**18) How do you change the number type in the middle of a list?**

The <li> tag includes two attributes – type and value. The type attribute can be used to change the numbering type for any list item. The value attribute can change the number index.

**19) What are style sheets?**

Style sheets enable you to build consistent, transportable, and well-defined style templates. These templates can be linked to several different web pages, making it easy to maintain and change the look and feel of all the web pages within site.

**20) State  bullet types available in HTML**

With ordered lists, you can select to use some different list types including alphabetical and Roman numerals. The type attribute for unordered lists can be set to disc, square, or circle.

**21) How do you create multicolored text in a webpage?**

To create text with different colors, use the <font color=”color”>…</font> tags for every character that you want to apply color. You can use this tag combination as many times as needed, surrounding a single character or an entire word.

**22) Why are there both numerical and named character entity values?**

The numerical values are taken from the ASCII values for the various characters, but these can be difficult to remember. Because of this, named character entity values were created to make it easier for web page designers to use.

**23) Write an HTML table tag sequence that outputs the following:**

**50 pcs 100 500  
10 pcs 5 50**

<table>

<tr>

<td>50 pcs</td>

<td>100</td>

<td>500</td>

</tr>

<tr>

<td>10 pcs</td>

<td>5</td>

<td>50</td>

</tr>

</table>

**24) What is the advantage of grouping several checkboxes together?**

Although checkboxes don’t affect one another, grouping checkboxes together help to organize them. Checkbox buttons can have their name and do not need to belong to a group. A single web page can have many different groups of checkboxes.

**25) What will happen if you overlap sets of tags?**

If two sets of HTML tags are overlapped, only the first tag will be recognized. You will find this problem when the text does not display properly on the browser screen.

**26) What are applets?**

Applets are small programs that can be embedded within web pages to perform some specific functionality, such as computations, animations, and information processing. Applets are written using the Java language.

**27) What if there is no text between the tags or if a text was omitted by mistake? Will it affect the display of the HTML file?**

If there is no text between the tags, then there is nothing to format. Therefore no formatting will appear. Some tags, especially tags without a closing tag like the <img> tag, do not require any text between them.

**28) Is it possible to set specific colors for table borders?**

You can specify a border color using style sheets, but the colors for a table that does not use style sheets will be the same as the text color.

**29) How do you create a link that will connect to another web page when clicked?**

To create hyperlinks, or links that connect to another web page, use the href tag. The general format for this is: <a href=”site”>text</a>  
Replace “site” with the actual page URL that is supposed to be linked to when the text is clicked.

**30) What other ways can be used to align images and wrap text?**

Tables can be used to position text and images. Another useful way to wrap text around an image is to use style sheets.

**31) Can a single text link point to two different web pages?**

No. The <a> tag can accept only a single href attribute, and it can point to only a single web page.

**32) What is the difference between the directory and menu lists and the unordered list?**

The key difference is that the directory and menu lists do not include attributes for changing the bullet style.

**33) Can you change the color of bullets?**

The bullet color is always the same as that of the first character in the list item. If you surround the <li> and the first character with a set of <font> tags with the color attribute set, the bullet color, and the first character will be a different color from the text.

**34) What are the limits of the text field size?**

The default size for a text field is around 13 characters. However, if you include the size attribute, you can set the size value to be as low as 1. The maximum size value will be determined by the browser width. If the size attribute is set to 0, the size will be set to the default size of 13 characters.

**35) Do <th> tags always need to come at the start of a row or column?**

Any <tr> tag can be changed to a <th> tag. This causes the text contained within the <th> tag to be displayed as bold in the browser. Although <th> tags are mainly used for headings, they do not need to be used exclusively for headings.

**36) What is the relationship between the border and rule attributes?**

Default cell borders, with a thickness of 1 pixel, are automatically added between cells if the border attribute is set to a nonzero value. Likewise, If the border attribute is not included, a default 1-pixel border appears if the rules attribute is added to the <table> tag.

**37) What is a marquee?**

A marquee allows you to put a scrolling text in a web page. To do this, place whatever text you want to appear scrolling within the <marquee> and </marquee> tags.

**38) How do you create text on a webpage that will allow you to send an email when clicked?**

To change text into a clickable link to send email, use the ***mailto*** command within the href tag. The format is as follows:

<A HREF=”mailto:youremailaddress”>text to be clicked</A>

**39) Are <br> tags the only way to separate sections of text?**

No. The <br> tag is only one way to separate lines of text. Other tags, like the <p> tag and <blockquote> tag, also separate sections of text.

**40) Are there instances where the text will appear outside of the browser?**

By default, the text is wrapped to appear within the browser window. However, if the text is part of a table cell with a defined width, the text could extend beyond the browser window.

**41) How are active links different from normal links?**

The default color for normal and active links is blue. Some browsers recognize an active link when the mouse cursor is placed over that link; others recognize active links when the link has the focus. Those that don’t have a mouse cursor over that link is considered a normal link.

**42) Do style sheets limit the number of new style definitions that can be included within the brackets?**

Style sheets do not limit the number of style definitions that can be included within the brackets for a given selector. Every new style definition, however, must be separated from the others by a semicolon symbol.

**43) Can I specify fractional weight values such as 670 or 973 for font weight?**

Implementation largely depends on the browser, but the standard does not support fractional weight values. Acceptable values must end with two zeroes.

**44) What is the hierarchy that is being followed when it comes to style sheets?**

If a single selector includes three different style definitions, the definition that is closest to the actual tag takes precedence. Inline style takes priority over embedded style sheets, which takes priority over external style sheets.

**45) Can several selectors with class names be grouped together?**

You can define several selectors with the same style definition by separating them with commas. This same technique also works for selectors with class names.

**46) What happens if you open the external CSS file in a browser?**

When you try to open the external CSS file in a browser, the browser cannot open the file, because the file has a different extension. The only way to use an external CSS file is to reference it using <link/> tag within another HTML document.

**47) How do you make a picture into a background image of a web page?**

To do this, place a tag code after the </head> tag as follows:

<body background = “image.gif”>

Replace image.gif with the name of your image file. This will take the picture and make it the background image of your web page.

**48) What happens if the list-style-type property is used on a non-list element like a paragraph?**

If the list-style-type property is used on a non-list element like a paragraph, the property will be ignored and do not affect the paragraph.

**49) When is it appropriate to use frames?**

Frames can make navigating a site much easier. If the main links to the site are located in a frame that appears at the top or along the edge of the browser, the content for those links can be displayed in the remainder of the browser window.

**50) What happens if the number of values in the rows or cols attribute doesn’t add up to 100 percent?**

The browser sizes the frames relative to the total sum of the values. If the cols attribute is set to 100%, 200% the browser displays two vertical frames with the second being twice as big as the first.

**51) Which browsers support HTML5?**

The latest versions of Google Chrome, Apple Safari, Mozilla Firefox, and Opera all support most of the HTML5 features.

**52) Name two new tags included in the HTML 5**

<Video> and <Audio> are new tags which are included in HTML5 version. They are mainly used as a replacement for Flash, Silverlight, and similar technologies to play multimedia items.

**53) Do you know which are two semantic tags are included in HTML5 version?**

The <article> and <section> tags are two new tags that are included in HTML5. Articles can be composed of multiple sections that can have multiple articles. An article tag represents a full block of content which is a section of a bigger whole.

**54) What is <figure> in HTML5?**

This tag represents a piece of self-contained flow content. It is mostly used as a single unit as a reference the main flow of the document.

**55) What is the use of Canvas element?**

The canvas element helps to build charts, graphs, bypass Photoshop to create 2D images and place them directly into HTML5 code.

**56) What are the new FORM elements which are available in HTML5?**

The new Form elements in HTML5 offers much better functionality than the earlier versions.

The tags given provided to carry out these functions are:

1) <datalist> – This tag is use to specify a list of options for input controls.

2) <keygen> – This tag represents a key-pair generator field.

3) <output> – It represents the result of any scripting calculation.

**57) Tell me two benefits of HTML5 Web Storage**  
Two main benefits of HTML5 Web Storage:

* It can store up to 10 MB data which is certainly more than what cookies have.
* Web storage data cannot be transferred with the HTTP request. It helps to increase the performance of the application.

**58) What are two types of Web Storage in HTML5?**

Two storage types of HTML5 are:

**Session Storage:**

It stores data of current session only. It means that the data stored in session storage clear automatically when the browser is closed.

**Local Storage:**

Local storage is another type of HTML5 Web Storage. In local storage, data is not deleted automatically when the current browser window is closed.

**59) What is the Application Cache in HTML5 and why it is used?**

The Application Cache concept means that a web application is cached. It can be accessible without the need for internet connection.

**Some advantages of Application Cache:**

1. Offline browsing – Web users can also use the application when they are offline.
2. Speed – Cached resources load quicker
3. Reduce the server load – The web browser will only download updated resources from the server.

**60) Explain five new input types provided by HTML5 for forms?**

Following are the important, new data types offered by HTML5:

1. Date: It allows the user to select a date.
2. datetime-local: This input type allows the user to select a date and time without time zone.
3. datetime: This input type allows the user to select a date and time with time zone.
4. month: It enables the user to select a month and year
5. email: These input fields used to contain an e-mail address.

What is HTML?

Introduced by Tim Berners-Lee, HTML stands for HyperText Markup Language. It is an open source technology, which means it is not owned by anyone in particular and can be used without any cost. HTML provides data to the user in a way that the user can query or lookup for more information just by clicking a highlighted word (a link or image etc.) or by navigating from one HTML page to another. It is made up of tags (<>) which annotate text.

HTML Versions

HTML 1.0: It was the first release but had very limited usage.

HTML 2.0: Released by adding some new features to HTML 1.0, this was the standard application for website development.

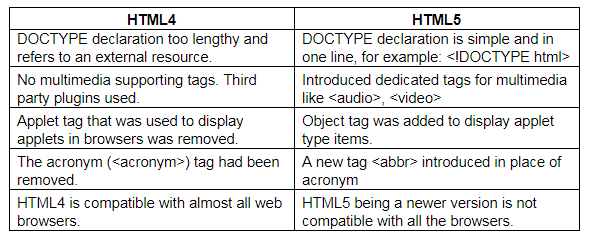
HTML 3.0: Due to improper standards of the existing version of HTML, popular browser developer Netscape Navigator had some of its own tags. This is when HTML 3.0 was introduced.

HTML 3.2: This version stopped the non-standardized HTML by introducing World Wide Web Consortium (in short W3C) to keep the language standardized.

HTML 4.0: Created an evolution as the browser support was undertaken by Microsoft in their Internet Explorer (IE).

HTML 5.0: The current version of HTML which was introduced specially to work with any type of devices like mobile, tablets, large monitors etc.

Difference between HTML4 and HTML5



**Difference between HTML and HTML5 are given below:**

| **HTML5** | **HTML** |
| --- | --- |
| HTML5 has high-level video and audio support. | High-level video and audio support is not a part of the version and specifications in the previous HTML. |
| Canvas, SVG and other virtual vector graphics are supported in HTML5. | In HTML, if we want to implement vector graphics, that was only possible by using third party library like VML, Silver-light, etc. |
| SVG and MathML can be used in text. | This is not possible in HTML. |
| Web SQL database, application cache and web storage is used as permanent storage. | Browser cache can be used as temporary storage. |
| HTML5 is more mobile friendly. | HTML is less mobile friendly. |
| Doctype declaration is simple and easy. | Doctype declaration is long and complicated.. |
| Allows drag and drop effect. | Does not allow drag and drop effect. |
| Attributes of Async, charset, and ping are available. | These attributes are not available in HTML. |
| HTML5 support javascript to run in the background. | Does not support javascript to run within the web browser. |
| We can draw shapes like rectangle, circle, and triangle in HTML5. | It is not possible to draw shapes like rectangle, circle, triangle etc. |

1. What is the need of mentioning <!DOCTYPE HTML> at the beginning of an HTML page?

The <!DOCTYPE HTML> indicates the version of HTML which in this case is 5. The earlier versions like HTML4 were based on Standard Generalized Markup Language (SGML) and required a Document Type Definition (DTD). HTML5 however, is not based on SGML and doesn’t need a DTD.

2. List out the new Structural Elements in HTML5.

HTML5 introduced few structural elements to define different parts of a web page like article, header, footer, main, mark and many more.

These are sections in which a web page is usually divided into. In HTML4, the same was implemented using div with an id/class name to it.

3. What is the use of the article tag?

It defines space for an article that is independently distributable. For example, A magazine or newspaper article.

4. How can we produce a horizontal line on a webpage?

A horizontal line can be produced on a web page using the <hr> tag. The other point to note about the hr tag is that it doesn’t have an end tag as most of the HTML tags do.

5. Why is the div tag so useful in developing HTML web pages?

The HTML div tag (ie <div>...</div>) is used to create a section of a web page. It can hold another sections or elements in it. It is also possible to hold direct text in it, but not the one that is used.

6. Define the types of HTML Headings.

HTML holds 6 types of headings starting from h1 to h6. The heading one (h1) is the maximum font and h6 is the minimum font.

7. How can we group heading elements?

All the heading tags or elements can be grouped together in hgroup tag:

<hgroup>

* <h1>Main heading</h1>
* <h2>Subheading</h2>

</hgroup>

8. Define span tag.

A span tag is similar to div section but is used to divide the screen into even smaller sections. <span>...</span>

9. Define Meta tags.

Meta tags are the tags that provide more information to our web pages. Some of the tags that are examples for meta are:

* **Link**: Defines a relation between the web page and an external source.
* **Style**: Inserts styles (CSS) details to the web page.
* **Title**: Provides a title to the web page.

10. What are the most commonly used List tags?

The list tags are used to list out any information. There are types in listing out the information using the tags, these are:

* **Ordered List**: Used as <ol>...</ol> and provides the list in a numbered format.
* **Unordered List**: Used as <ul>...</ul> and provides the list in a bullet format.

NOTE: both the above use list item tags ie <li>...</li> in them

* **Definition List**: Used as <dl>...</dl> which provides a list in it and takes Definition Term (ie <dt>...</dt>) and a detailed definition (ie <dd>...</dd>).

11. What is the best way to group form elements?

The <fieldset> tag can be used to group some of the form elements. When the purpose is to provide some HTML elements as a group to the user then, fieldset tag is the best one to use. It takes another tag in it <legend> which provides a title to the grouped elements.

12. List few input type attributes that are new in HTML5.

An input tag can take some attributes based on the requirement. ie <input type=”text”> creates a textbox that takes text/number/special characters into it. The attribute type can take more values, these are:

* **Datetime**: Gives a datetime accepted textbox.
* **Placeholder**: Places an editable text in the textbox.
* **Number**: Takes only numbers and no text and special characters.
* **Tel**: Takes inputs like a telephone number.
* **Email**: Takes text with email format.

13. How is it possible to insert a copyright symbol in a web page?

As there is no direct key to type and insert the copyright symbol in a web page, it has to be given by combining different characters. This can be done in multiple ways like:

* &copy.
* & #169.

14. What is a hyperlink?

A hyperlink is a text/image on a webpage, which when clicked redirects to a new webpage.

15. Explain the type and value attributes for a list item (ie <li>).

The type attribute helps to change the listing/numbering of the list items. It is also used to change the numbering index the value attribute is used.

16. Describe the way in which color can be applied to an element in an HTML page.

HTML elements can be colored in three ways:

* Color name ie red/blue etc.
* Hex Color ie #efefef, and
* RGB(10,234,128) which is a combination of red, green, blue.

17. Explain the two web storage in HTML5.

In HTML 5 data storage can be done in two ways:

* **Session Storage**: The current session (i.e., a user who is browsing the website) details are stored. Once the user closes the browser, the storage is cleared.
* **Local Storage**: Data stored in local storage will not be cleared automatically or when the user closes the browser.

18. Explain Graphics in HTML5.

HTML5 has two types of providing graphics, SVG and Canvas. SVG is helpful when using devices like tablets, iPads etc. Whereas, Canvas is an area in the document or HTML page where graphics can be drawn.

19. What are the Server-Sent Events (SSE)?

The events that come from the server to the browser are termed as Server Side Events.

20. List out the new attributes provided in HTML5 for the form tag.

HTML5 has introduced two new attributes for the form tag which are:

* autocomplete.
* non-validate.

21. What is the usage of a novalidate attribute for the form tag that is introduced in HTML5?

The form attribute novalidate is a Boolean type which takes true/false values. If disabled or made false, the form data is not validated when submitted.

22. Why do we need to autocomplete attribute for the form tag?

The autocomplete attribute is usually applied to text boxes with which the user can fill the textboxes with the previous values given to it.

23. How can you hide  HTML source code?

It is not possible to hide the HTML source code as the browser needs to understand the code.

24. How can a static HTML page redirect the visited a new page?

The meta tag has an attribute called URL which takes you to a redirected link.

25. What is Cell Padding?

Cell Padding refers to the space between the cell wall and cell border.

26. What are the different kinds of Doctypes available?

The three kinds of Doctypes which are available:

* Strict Doctype
* Transitional Doctype
* Frameset Doctype

27. How do we comment HTML code in an HTML page?

HTML code can be commented using:  
<!-- all the code written here will be commented -->

28. List the API’s available in HTML5.

The available API’s in HTML are:

* DOM Level 1
* DOM Level 2 Core
* DOM Level 2 HTML
* DOM Level 3

29. Explain Application Cache.

Application Cache is a mechanism in which the web applications can also run offline. One of the advantages of using the application cache is that the resources load faster.

30. When do we use a meter tag?

This tag is also known as a gauge and is used to define a scalar measurement which is in a known range.

31. What is the usage of the cite tag?

The cite tag is used to represent the title of a work (like a book, paper, poem etc). This tag is mostly used as an inline tag.

32. What is a contenteditable attribute?

This attribute is a new feature in HTML5 using which any element can be edited directly from the browser.

33. How are Web Workers APIs used in HTML5?

Using Web Workers APIs provide a way to run something in the background with which certain tasks can be performed without distracting the user interface.

34. What is MathML in HTML5?

MathML stands for Mathematical Markup Language and is used to show mathematical and scientific content on the web page. This expression should be inserted in a math tag.

35. Explain WHATWG.

WHATWG stands for **Web HyperText Application Technology Working Group** which is an organization that develops and also maintains the HTML and API for web applications.

36. Explain Microdata in HTML5.

Using Microdata, the metadata is nested within existing content on web pages. Search engines extract the microdata from a web page to provide a good browsing experience.

37. List some of the formatting elements in HTML5.

HTML5 holds some new and old formatting elements, all together here is the list:

* Marked text
* Emphasized text
* Subscripts
* Superscripts
* Small text
* Deleted text
* Inserted text

38. What is the difference between HTML and XHTML?

HTML stands for HyperText Markup Language and XHTML stands for eXtensible HyperText Markup Language which is defined in XML format.

39. What is an API in HTML5?

API stands for Application Programming Interfaces and is a way to create applications. They use pre-built components. Using the available APIs, developers can integrate the features into their websites.

40. List the API’s available in HTML5.

The HTML5 standard introduced a number of new APIs. Here is a small list:

* Constraint Validation API
* Text Track API
* Media API
* Command API
* User Interaction
* Data Transfer API
* History API
* Application Cache API

41. What is a manifest file in HTML?

With the introduction of application cache, a web application is accessible without an internet connection. Every page of the web application should hold the manifest attribute to get cached.

42. What is the difference between the font size units em and rem?

By default, the font size in a browser is 16px and can be increased or decreased in the browser settings. 1em equals the font-size given in the browser. Whereas, the rem value depends on root element that is HTML tag.

43. What are the two methods that are used in form elements action attribute?

A form has an action attribute that takes two values, Post and Get (default). The Post method is used to submit (insert\update\delete) data whereas, Get method is used to get some data.

44. What is Web SQL?

HTML5 has introduced a database connection to store values on the client side. Web SQL is such a database in the browser which holds client information. It is important to note that Web SQL does not store critical data (like passwords) in it.

45. What are the minimum number of HTML tags are required to create an HTML page?

A minimum of 3 tags (HTML, head, and body) are required to create a working HTML

Interview Tips

HTML is considered as a very minor technology, but many elements have been introduced with the release of the latest HTML version 5 and there is now a very high chance that the professionals will be posed with more questions based on HTML5 in the job interviews. It is, therefore, advised that both freshers and experienced must know and understand the differences between the version 4 & 5.

==================================================================

**Q #3) What is <!DOCTYPE>? What are the different types of <!DOCTYPE> that are available?**

The <!DOCTYPE> declaration provides instruction to the web browser to understand what information it should be display, and the need to start with <!DOCTYPE> declaration. In HTML5, DOCTYPE declaration is very short, and case-insensitive, and <!DOCTYPE html> is written at the top of every HTML5 page.

**The following DOCTYPE are also supported in HTML5:**

* <!DocTYpe html>
* <!dOCtype html>
* <!doctype html>

**There are 3 types of DOCTYPES as mentioned below:**

* Strict Doctype
* Frameset Doctype
* Transitional Doctype

**Q #4) What are the New tags in Media Elements in HTML5?**

**The new tags in Media Elements in HTML5 are enlisted below**:

* **<audio>:** Apply for multimedia contents like sounds, audio streams or music, embed audio content without the requirement of any additional plug-in like flash player.
* **<video>:** Apply for video content like video streams or movie clip, embed video content etc.
* **<source>:** Apply for multiple media resources in media elements, such as audio, video, picture etc.
* **<embed>**: Apply for an external application or embedded content (a plug-in).
* **<track>:** Apply for text tracks in the media elements such as video or audio. This tag is used for subtitles or caption files while the video media is playing.

**Q #5) What is a tag in HTML5?**

A tag is a special content in HTML5, which is surrounded by an angle bracket (<,>). A slash (/) symbol is used to close the tag after completing the block.

**For Example**

<title> This is my Browser </title>

An Html5 tag is a set of characters that develop a formatted command for a web page. These formatted commands communicate and send the instruction to the Browser.

**Q #6) What is the minimum number of HTML5 tags that are required to create a Web page?**

Minimum 3  HTML5 tags are required to create a Web page, such as (<HEAD>, <BODY>, <HTML>).

**Q #7) What is the importance of Drag and Drop in HTML5?**

Drag and Drop is the most important User Interface concept which makes it easy to grab an object and Drag it at the place you want with the help of a mouse click.

Some common features that are mostly used by Drag and Drop operation include move, link or copy.

We can drag an image using elements, type = **<img draggable = “true”>**, to make an image draggable and set the draggable image attribute to true.

**Q #8) Explain new Form input types in HTML5.**

**HTML5 has 14 new forms input types:**

* **Date:**This is a Date picker, we can pick a date by using type = **“date”.**
* **Week:**This is a Week picker, we can pick a week by using type = **“week”.**
* **Month:**This is a Month picker, we can pick a month by using type = **“month”.**
* **Time:**This is a Time picker, we can pick the time by using type = **“time”.**
* **Datetime:**This is a combined date and time, we can pick the combination of date and time by using type = **“datetime”.**
* **Datetime-local:**A combined local date and time, we can pick the combination of local date and time using type = **“DateTime-local”.**
* **Email:**Allows one or more Email Addresses, we can enter multiple email addresses using type = **“email”.**
* **Tel:**Allows different phone numbers around the world. A phone number is validated by the client-side. We can enter a phone number using type = **“tel”.**
* **Search:**Allows to search queries by input text. We can enter multiple queries using type = **“search”.**
* **Number:**Allows inserting a numerical value with additional attributes such as min, max. etc., and we can enter multiple numerical values using type = **“number”.**
* **Url:**A url input type, that is used for the web address. In a single url, we can use multiple attributes using type = **“url”.**
* **Color:**Allows to select multiple colors, we can pic multiple color using type = **“color”.**
* **Range:**Allows to insert a numerical value within a specific range, Range is similar to the number but it is much specific. We can enter a numerical value within a range using type = **“range”.**
* **Placeholder:**Allows to display a short hint (usually in a light color) in the input fields, before we enter the value. We can write a short hint in the input field by using type = **“placeholder”.**

**Q #9) What is image map in html5?**

Image maps are a combination of URL and images, where clicking on these images (clickable area of the image) will open different new web pages.

**Two types of image maps are available in HTML5, i.e. client side and server side:**

**The client-side image map** is created by using two elements **<area>** and **<map>**, where the map holds the map information and the area element takes the attributes to define each section of the map. **Server-side image map** created by using **<usemap>** attribute, the usemap attribute is the name of our map.

**Q #10) How do you write a copyright symbol on a web browser page?**

In order to write a copyright symbol, we need to type © or © in an HTML5 file.

**Q #11) How to optimize website assets?**

We need to understand some basic optimization rules, in order to optimize website assets. Initially, we should decrease the download size and make fewer http requests.

**To optimize website assets we can follow the below techniques:**

* File compression
* File concatenation
* CDN Hosting
* Offloading assets
* Re-organizing
* Refining code

**Q #12) What is the use of MathML Element in HTML5?**

The word MathML (Mathematical Markup Language) is a markup language, that is used to show scientific and mathematical expression on the web. MathML is a form of XML (extensible markup language) to describe the Math notation.

We can use **<math>…</math>** tags inside the HTML5 documents for implementing MathML element.

**Example:** print a²+2b+5=0 using HTML5 code.

<!doctype html>

<html>

<head>

<meta charset = “UTF-8”>

<title> MathMl Example </title>

</head>

<body>

<math xmlns=<a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a>”>

<mrow>

<mrow>

<msup>

<mi> a </mi>

<mn> 2 </mn>

</msup>

<mo> + </mo>

<mrow>

<mn> 2 </mn>

<mo> </mo>

<mi> b </mi>

</mrow>

<mo> + </mo>

<mn> 5 </mn>

</mrow>

<mo> = </mo>

<mn> 0 </mn>

</mrow>

</math>

</body>

</html>

**Note:**If MathML is used by an application that conforms to the Namespace in an XML Recommendation, then the following namespace should be used:

http://www.w3.org/1998/Math/MathML

**Q #13) What are the various formatting tags in HTML5?**

**HTML5 has some old and new formatting tags as given below:**

* **Marked text:**Represents highlighted text for Reference purposes. We can use **<marks**> tags for text highlight.
* **Deleted text:**Specifies the deleted block of text. We can use **<del>** tags to implement a deleted text.
* **Emphasized text:** Defines the emphasized text. We can use **<em>** tags to implement an emphasized text.
* **Inserted text:**Inserts a block of text into a document. We can use **<ins>** tags to implement an inserted text.
* **Small text:** Display inserted text in a small size. We can use **<small>** tags to implement a small text.
* **Superscript text:**This is a superscripted text. We can use **<sup>** tags to implement a superscript text.
* **Subscript text:** This is a subscripted text. We can use **<sub>** tags to implement a superscript text.

**Q #14) Why do we use HTML5?**

HTML5 supports animation, drawing, audio, video, etc and it easily embeds a video on the web page. It does not require any additional software like Flash for watching videos.

**Some of the important reasons to use HTML5 are given below:**

* Legacy and cross-browser support
* Better interactions
* Smarter storage
* Cleaner code

**Q #15) What is a hyperlink? Does it only apply to text?**

The hyperlink is a link that allows a user to move from one web page to another web page when clicked. Hyperlink concept is used on text and as well as image, and we can convert an image into a link with the help of <a href = “ ”….</a>> tags.

**Example to Create a hyperlink in an image (clickable image) is shown below.**

<!DOCTYPE html>

<html>

<head>

<title> Image Hyperlink Example </title>

</head>

<body>

Click the following link

<a href = “https://en.wikipedia.org/wiki/HTML5” target = “\_self”>

<img src = “image.png” alt = “Wiki” border = “0/”>

</a>

</body>

</html>

**Q #16) Explain the concept of web storage in HTML5.**

Web storage provides the facility to store the data of our web applications locally into the user’s browser. It can store up to 10 MB data. Web storage helps to increase the performance of our applications.

**There are two types of web storage that are used to store data locally in HTML5:**

* **Local storage:**This stores the data that will not expire or clear automatically when a user closes or reopens a browser.
* **Session Storage:** This stores data for one session only(i.e, a user who is surfing the internet or website). Once the browser is closed, session data will automatically delete from the web browser.

**Q #17) Explain Geolocation API in HTML5.**

Geolocation API is used to locate a user’s geographical position.

For privacy reasons, the user is asked for permission to report the location information. Use the **navigator.geolocation.get current position()** method to get the user’s position and geographical coordinates (longitude and latitude number).

**Example to Return the latitude and longitude position of a user is shown below.**

<!DOCTYPE html>

<html>

<body>

<p>Click The My Location Button to get your Location.</p>

<button onclick="getLocation()"> My Location </button>

<p id="location"></p>

<script>

var x = document.getElementById("location");

function getLocation() {

if (navigator.geolocation) {

navigator.geolocation.getCurrentPosition(showPosition);

} else {

x.innerHTML = "Geolocation is not supported by this browser.";

}

}

function showPosition(position) {

x.innerHTML = "Latitude: " + position.coords.latitude +

"<br>Longitude: " + position.coords.longitude;

}

</script>

</body>

</html>

**Example Explained:**

* Check, if Geolocation is supported or not.
* If Geolocation is supported, run the getCurrentPosition() method. If Geolocation is not supported, display the error message to the user.
* If getCurrentPosition() method is successful, it returns coordinates and functions specified in the parameter.
* The showPosition() function, gets the output – Longitude and Latitude.

**Q #18) Explain HTML5 Graphics.**

HTML5 supports two types of graphics i.e. Canvas and SVG.

**#1) Canvas:**<canvas> element is used to design graphics on the web page, and it has several methods available for drawing circles, boxes, adding images and text. 300 px X 150 px (width X height) is the default pixel size of canvas.

**Example to Draw square Box using canvas element is shown below.**

<!DOCTYPE HTML>

<html>

<head>

<style>

#mycanvas{border:2px solid pink;}

</style>

</head>

<body>

<canvas id = “mycanvas” width = “150” height = “150”></canvas>

</body>

</html>

**#2) SVG: <svg>**Scalable Vector Graphics, are mostly used for graphical application and scalable vector type diagrams, such as X, Y coordinate system, two-dimensional and pie charts. This makes it faster and lightweight. SVG follows XML format.

**Example to draw a Rectangle using SVG element is shown below.**

<!DOCTYPE html>

<html>

<body>

<svg width = “400” height = “150”>

<rect width = “400” height = “150” style = “fill:rgb(200,220,255);stroke-width:10;stroke:rgb(0,0,0)”/>

</svg>

</body>

</html>

**Q #19) What are the advantages of using HTML5?**

HTML5 is the advanced version of HTML. HTML5 enables to create easier or interactive websites by embedding video, audio, and graphics on the web page.

HTML5 support multimedia technology and graphical content to the web without using any third party plugins.

**Some of the most important features added by HTML5 include:**

* Geolocation
* Offline Application Cache
* Client-side database
* Error Handling
* New Structure and new multimedia elements.
* Browser Support and compatibility.

**Supports Some New Application Programming Interface (API) like:**

* Browser History Management
* Drag and Drop
* 2D drawing on a web page
* Time media playback

**Supported Applications include:**

* Web Workers – JavaScript
* Local File Access
* Application Cache
* Local data storage
* Local SQL databases

**Q #20) How to create a link that will connect to another web browser page when clicked in HTML5?**

Use the **<href>** tag to create hyperlinks, and these are used to connect to another web page. We can create hyperlink by using type = **<a href = “ url of website”> text</a>** tag. When we click the text then, the linked url of the web page will open.

**For Example**, the code below is a link that leads to the Yahoo home page, located at the address <https://in.yahoo.com>

<!DOCTYPE html>

<html>

<body>

<h2> Yahoo link </h2>

<a href = “https://in.yahoo.com”> Visit Yahoo Home Page </a>

</body>

</html>

**Q #21) How many web browsers does HTML5 support?**

Most of the latest version of Apple Safari, Google Chrome, Opera, Internet Explorer, and Mozilla Firefox are supported by HTML5.

**Q #22) What are the frequently useful Api in HTML5?**

**A list of the most frequently useful API's in HTML5 include:**

* Media API
* Data Transfer API
* Application Cache API
* User Interaction
* History API
* Constraint Validation API
* Command API
* Text Track API

**Q #23) How many tags were removed in HTML5?**

**The list of the tags that are removed completely in HTML5 include:**

* <frame>
* <frameset>
* <noframes>
* <big>
* <basefront>
* <applet>
* <center>
* <bigcenter>
* <acronym>
* <basefont>
* <dir>
* <tt>
* <font>
* <strike>

**Q #24) Which video and audio formats are used for embedding on web page?**

**Formats of video and audio that are used for embedding on the web page are given below:**

* **Video:**MPEG4, Ogg, WebM.
* **Audio:** WAV, Ogg Vorbis, MP3.

**Q #25) List out the page structure elements of HTML5.**

**Page structure elements of HTML5 are given below:**

* **<header>:**Represents the header section and stores the starting information about the web page.
* **<footer>:**Represents the footer section (last portion) of the page.
* **<nav>:**Represents the navigation elements of the HTML page.
* **<article>:**It is a set of information.
* **<section>:**It is a set of instruction that is used inside the article block to define the basic structure of a page.
* **<aside>:**Sidebar content of the page.

**Q #26) Explain some of the common lists to design a web page.**

**The common lists to design a web page include:**

* Directory list
* Definition list
* Ordered list
* Menu list
* Unordered list

**Different**– Different tags are used to compose each list.

**Q #27) What is the use of output tag in HTML5?**

**<output>** tag is used to represent the different types of output and result.

**Q #28) Which element provides the autocomplete feature in a textbox?**

In HTML5 **<Datalist>** element, provides the autocomplete feature in a textbox.

**Q #29) How to Embed Video and Audio in Html5?**

**Video:**

**Example** to Embed a video in HTML5 is shown below.

|  |  |  |
| --- | --- | --- |
| 1 | <!DOCTYPE html> | |
| 2 | <html> |

|  |  |
| --- | --- |
| 3 | <body> |
| 4 | <video width = “300” height = “250” controls> | |

|  |  |  |
| --- | --- | --- |
| 5 | <source src = “MyMovie.mp4” type = “video/mp4”> | |
| 6 | </video> |

|  |  |
| --- | --- |
| 7 | </body> |
| 8 | </html> |
|  |  |

**Audio:**

**Example** to Embed an Audio in HTML5 is shown below.

|  |  |  |
| --- | --- | --- |
| 1 | <!DOCTYPE html> | |
| 2 | <html> |

|  |  |
| --- | --- |
| 3 | <body> |
| 4 | <audio controls> | |

|  |  |  |
| --- | --- | --- |
| 5 | <source src = “song.mp3” type = “audio/mpeg”> | |
| 6 | </audio> |

|  |  |
| --- | --- |
| 7 | </body> |
| 8 | </html> |
|  |  |

**Q #30) What are the migrated tags from HTML4 to HTML5?**

**List of the migrated tags from HTML4 to HTML5 are given below:**

**Typical HTML4**         **Typical HTML5**

<div id = “footer”>                <footer>  
<div id = “header”>              <header>  
<div id = “menu”>                <nav>  
<div id = “post”>                   <article>  
<div id = “content”>            <section>

**Q #31) What are the part of HTML5 Technologies?**

**List of the part of HTML5 Technologies are given below:**

* Web Workers
* Web Storage
* SVG
* CSS3
* Server-Sent Events(SSE)
* Microdata
* Web Intents
* Web Sockets
* Offline Application
* Geolocation
* File API
* Web Messaging
* Drag and Drop
* Canvas 2D

**Q #32) What is the difference between SVG and Canvas elements?**

| **SVG** | **Canvas elements** |
| --- | --- |
| It is Object Model-based. | It is pixel based. |
| Is suitable for using large rendering areas. | Is suitable for using small rendering areas. |
| SVG provides any support for event handlers . | Canvas does not provide any recourse for event handlers. |
| Modification is allowed through script and CSS. | Modification is allowed through script only. |
| SVG has Better scalability | Canvas has poor scalability. |
| SVG is Vector based (composed of shapes). | Canvas is Raster based (composed of a pixel). |
| SVG is not suitable for Games graphics. | Canvas is suitable for games graphics. |
| SVG does not depend on resolution. | Canvas is completely dependent on resolution. |
| SVG is capable for API animation. | Canvas has no any API for animation. |
| SVG is suitable for printing with high quality and any resolution. | Canvas is not suitable for printing high quality and high resolution. |

**Q #33) What is the use of <figure> tag in HTML5?**

The figure tag is used to add an image in the document on a web page.

**Q #34) What is Microdata in HTML5?**

Microdata is a new simple semantic syntax, that is used to add the nested groups of name and value pair of data to documents, that are commonly based on the page content. Microdata is used for new global attributes.

**Q #35) Explain Meta tags.**

Meta tags are used to provide useful information to our web pages.

**Some of the tags include:**

* **Title:** Provides a title to the web page.
* **Style:**Inserts some styles and CSS details to the web page.
* **Link:** Defines the relationship between one page to another page and an external source.

Some Useful Abbreviations

* **XML:**Extensible Markup Language
* **W3C:**World Wide Web Consortium
* **SQL:**Structured Query Language
* **JPEG:**Joint Photographic Expert Group
* **IP:**Internet Protocol
* **HTTP:**Hypertext Transfer Protocol
* **href:**Hypertext Reference
* **FTP:**File Transfer Protocol
* **API:**Application Programming Interface
* **IDE:**Integrated Development Environment
* **WEFT:**Web Embedding Fonts Tool
* **DOM:**Document Object Model
* **Url:**Uniform Resource Locator

=============================================================================================

HTML5 was designed to replace both HTML 4, XHTML, and the HTML DOM Level 2.

Major goals of the [HTML specification](http://www.w3.org/TR/html5/) were to:

* Deliver rich content (graphics, movies, etc.) without the need for additional plugins (e.g., Flash).
* Provide better semantic support for web page structure through the introduction of new structural element tags.
* Provide a stricter parsing standard to simplify error handling, ensure more consistent cross-browser behavior, and simplify backward compatibility with documents written to older standards.
* Provide better cross-platform support (i.e., to work well whether running on a PC, Tablet, or Smartphone).

Key new features of HTML5 include:

* Improved support for embedding graphics, audio, and video content via the new [<canvas>](http://www.w3schools.com/tags/tag_canvas.asp), [<audio>](http://www.w3schools.com/tags/tag_audio.asp), and [<video>](http://www.w3schools.com/tags/tag_video.asp) tags.
* Extensions to the JavaScript API such as [geolocation](http://www.w3schools.com/html/html5_geolocation.asp) and [drag-and-drop](http://www.w3schools.com/html/html5_draganddrop.asp) as well for [storage](http://www.w3schools.com/html/html5_webstorage.asp) and [caching](http://www.w3schools.com/html/html5_app_cache.asp).
* Introduction of [“web workers”](http://www.w3schools.com/html/html5_webworkers.asp).
* Several new semantic tags were also added to complement the structural logic of modern web applications. These include the <main>, <nav>, <article>, <section>, <header>, <footer>, and <aside> tags.
* New form controls, such as <calendar>, <date>, <time>, <email>, <url>, and <search>.

The <header> element is used to contain introductory and navigational information about a section of the page. This can include the section heading, the author’s name, time and date of publication, table of contents, or other navigational information.

The <article> element is meant to house a self-contained composition that can logically be independently recreated outside of the page without losing it’s meaining. Individual blog posts or news stories are good examples.

The <section> element is a flexible container for holding content that shares a common informational theme or purpose.

The <footer> element is used to hold information that should appear at the end of a section of content and contain additional information about the section. Author’s name, copyright information, and related links are typical examples of such content.

**Describe the relationship between the <header> and <h1> tags in HTML5.**

In previous specifications of HTML, only one <h1> element was typically present on a page, used for the heading of the entire page. HTML5 specifies that <h1> represents the top-level heading of a “section”, whether that be the page <body>, or an <article> or <section> element. In fact, every <header> element should at least contain an <h1> element. If there is no natural heading for the section, it is a good indication it should not use an <article> or <section> tag.

**What is the difference between span and div?**

The difference is that span gives the output with *display: inline* and div gives the output with *display: block*.

span is used when we need our elements to be shown in a line, one after the other.

**What is the Geolocation API in HTML5?**

HTML5’s Geolocation API lets users share their physical location with chosen web sites. JavaScript can capture a user’s latitude and longitude and can send it to the back-end web server to enable location-aware features like finding local businesses or showing their location on a map.

Today, most browsers and mobile devices support the Geolocation API. The Geolocation API works with a new property of the global navigator object.

**A Geolocation object can be created as follows:**

*var geolocation = navigator.geolocation;*

The geolocation object is a service object that allows widgets to retrieve information about the geographic location of the user’s device.

**What’s one main result if you do not specify a *doctype* in an HTML page?**

New HTML5-specific tags will not be interpreted by the browser.

**What’s the difference between the <svg> and <canvas> elements?**

The <svg> element is a container for SVG graphics. SVG has several methods for drawing paths, boxes, circles, text, and even bitmap images.

SVG is a language for describing 2D graphics, but <canvas> allows you to draw 2D graphics on the fly using JavaScript.

SVG is XML-based, which means that every element is available within the SVG DOM. You can attach JavaScript event handlers for an element.

In SVG, each drawn shape is remembered as an object. If attributes of an SVG object are changed, the browser can automatically re-render the shape.

Canvas is rendered pixel by pixel. In canvas, once the graphic is drawn, it is forgotten by the browser. If its position should be changed, the entire scene needs to be redrawn, including any objects that might have been covered by the graphic.