**(1) What is the use of Canvas Element in HTML5?**

HTML5 Canvas element can be used to draw graphics images on a web page by using javascript.

**(2) Can you give an example of Canvas element how it can be used?**  
  
<canvas id=“DGTCanvas” width=“500″ height=“400″>  
</canvas>  
<script type=“text/javascript”>  
var DGTCanvas=document.getElementById(“DGTCanvas”);  
var DGTText=DGTCanvas.getContext(“2d”);  
DGTText.fillStyle=“#82345c”;  
DGTText.fillRect(0,0,150,75);  
</script>

This book is far better than any other learning material. It has very basic information that includes both HTML5 and CSS3 with sample code and comprehensive examples.

**(3) What is the purpose of HTML5 versus XHTML?**

HTML5 is the next version of HTML 4.01, XHTML 1.0 and DOM Level 2 HTML. It aims to reduce the need for proprietary plug-in-based rich internet application (RIA) technologies such as Adobe Flash, Microsoft Silverlight, Apache Pivot, and Sun JavaFX. Instead of using those plugins, it enables browser to serve elements such as video and audio without any additional requirements on the client machine.

**Related article on DGlobalTech.com**

* [**Flash versus HTML5**](http://dglobaltech.com/flash-versus-html5/)
* [**HTML5 – Video and Audio File formats and browser support**](http://dglobaltech.com/html5-video-and-audio-file-formats-and-browser-support/)
* [**HTML Javascript online Realtime Editor**](http://dglobaltech.com/html-javascript-online-realtime-editor/)

**(4) What is the difference between HTML and HTML5 ?**

HTML5 is nothing more then upgraded version of HTML where in HTML5 supports the innovative features such as Video, Audio/mp3, date select function , placeholder , Canvas, 2D/3D Graphics, Local SQL Database added so that no need to do external plugin like Flash player or other library elemenents.

**(5) WHAT are some other advantages of HTML5?**

**a)**Cleaner markup than earlier versions of HTML  
**b)**Additional semantics of new elements like <header>, <nav>, and <time>  
**c)** New form input types and attributes that will (and in Opera’s case, do) take the hassle out of scripting forms.

**(6) What is the  <!DOCTYPE>? Is it mandatory to use in HTML5?**

The <!DOCTYPE> is an instruction to the web browser about what version of HTML the page is written in. The <!DOCTYPE> tag does not have an end tag. It is not case sensitive.

The <!DOCTYPE> declaration must be the very first thing in HTML5 document, before the <html> tag.  As In HTML 4.01, all <! DOCTYPE > declarations require a reference to a Document Type Definition (DTD), because HTML 4.01 was based on Standard Generalized Markup Language (SGML). WHERE AS HTML5 is not based on SGML, and therefore does not require a reference to a Document Type Definition (DTD).

**(7) What are the New Media Elements in HTML5?**

New Media Elements in HTML5 are :

|  |  |
| --- | --- |
| TAG | DESCRIPTION |
| <audio> | For multimedia content, sounds, music or other audio streams |
| <video> | For video content, such as a movie clip or other video streams |
| <source> | For media resources for media elements, defined inside video or audio elements |
| <embed> | For embedded content, such as a plug-in |
| <track> | For text tracks used in mediaplayers |

**(8) What is the major improvement with HTML5 in reference to Flash?**

Flash is not supported by major mobile devices such as iPad, iPhone and universal android applications. Those mobile devices have lack of support for installing flash plugins. HTML5 is supported by all the devices, apps and browser including Apple and Android products. Compared to Flash, HTML5 is very secured and protected. That eliminates major concerns that we have seen with Flash.

**(10) What is the sessionStorage Object in html5 ? How you can create and access that?**

The HTML5 sessionStorage object stores the data for one session. The data is deleted when the user closes the browser window. We can create and access a sessionStorage, created “name” as session

<script type=“text/javascript”>  
sessionStorage.name=“DGTECH”;  
document.write(sessionStorage.name);  
</script>

**What makes HTML5 different from HTML?**

As we discussed above that HTML5 renders rich web contents without using any additional plugins as compared to previous HTML versions/standards. HTML5 comes with a lot new things as follows:

* New multimedia elements that supports for embedding audio, video and much more.
* Support for interactive graphics.
* New Form elements introduced in HTML5 including datalist, datetime, output, keygen, date, month, week, time, number, range, email, url etc.
* Elements deprecated in HTML5 are frame, frameset, noframe, applet, big, center etc.
* New APIs (Media API, Text Track API, Application Cache, User Interaction, Data Transfer API, Command API etc.) provided.
* HTML5 supports on different plateform like PC, TV , Mobile devices etc.
* Supporting web applications for offline data storage.

**Note:** Interviewer can further ask to elaborate above given new exciting features like How to embed audio, video, interactive graphics or data storage etc.? Please follow the link to [HTML5 Interview Questions with Detailed Answers](http://www.webdevelopmenthelp.net/2013/04/html5-interview-questions.html) here.  
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**What are the new Structuring elements in  HTML5?**

Website layouts are evolving for years. Most of the websites have a lot in common with respect to structuring elements, for example, these have navigation menus, headers, footers, side bars, tabbed panels etc. In order to implement these structuring parts, we normally use <div> and <span> elements using Id and class attributes as <div id=”header”> or <div id=”footer”>. That all works fine but we end up having lots of CSS and JavaScript code.  
As a result of number of Surveys and Studies done online, HTML5 introduced a number of in-built web page structuring elements as header, footer, nav etc. So, instead of <div id=”header”>, HTML5 has <header> element that really simplifies overall web page structure. Following is the list of available structuring elements in HTML5.

* <header>
* <footer>
* <nav>
* <article>
* <section>
* <time>
* <aside>
* <hgroup>
* <figure>
* <figcaption>

All these are self-explanatory but if you want to get details about above, please follow [W3C documentation here](http://www.w3.org/html/wg/drafts/html/master/sections.html).  
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**What is the usage of new HTML5 datalist element?**

Auto-complete feature in a text box is very handy in many scenarios and new HTML5 datalist element provides this feature. HTML5 datalist element contains a pre-defined list of values for a textbox. Let’s see datalist element in action with the help of following example. Consider we have textbox for entering your favorite browser name and datalist that contains list of values.

*<input list=”browsers”>*

*<datalist id=”browsers”>*

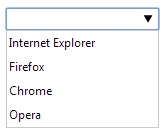
*<option value=”Chrome”>*

*<option value=”Internet Explorer”>*

*<option value=”Firefox”>*

*<option value=”Opera”>*

*</datalist>*

[](http://www.webdevelopmenthelp.net/wp-content/uploads/2014/09/autocomplete.jpg)  
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**What is output element in HTML5?**

Output element in HTML5 defines the result of a calculation. According to WHATWG HTML specification “*The output element represents the result of a calculation*“.

For example, if we have two different input elements and wanted to display input values result (sum or difference) in a label, we can use an output element as in below given code.

*<form onsubmit=”return false” oninput=”result.value = parseInt(x.value) – parseInt(y.value)”>*  
*<input name=”x” type=”number” step=”any”>*

*-*  
*<input name=”y” type=”number” step=”any”>*

*=*  
*<output name=”result”></output>*  
*</form>*

[HTML5 output element](http://www.webdevelopmenthelp.net/wp-content/uploads/2014/09/output1.jpg)  
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**What are the data- attributes in HTML5?**

data- attributes in HTML5 facilitates us to embed custom data to an element. Consider a scenario where we have some sensitive or private data related to a particular page or application without relevant attributes or elements, data- attributes can be used to serve the purpose.

There are few constraints in using data- attribute

* starts with “data-“
* at least one character after “data-“
* no upper case character in attribute name
* attribute value must be a string

Consider the following simple HTML code:

*<ul>*  
*<li data-profession=”Scientist”>Salman</li>*  
*<li data-profession=”Doctor”>Rehan</li>*  
*<li data-profession=”Engineer”>Nauman</li>*  
*<li data-profession=”IT Professional”>Zeeshan</li>*  
*</ul>*

We can easily use JavaScript to manipulate data- attribute.

*Now onward in this post, we will continue exploring HTML5 Interview Questions related to Graphics.*  
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**What is SVG?**

SVG – Scalable Vector Graphics is a vector image format based on W3C SVG specification. It’s used to draw two-dimensional graphics that are:

* more lightweight as compared to other image formats like jpeg and gif etc.
* XML-based
* support for animation
* maintain better quality even if re-sized
* faster rendering

In HTML5, we can easily embed SVG element in a Web Page.

*<body>*

*<svg id=”mysvgcircle” height=”200″ xmlns=”http://www.w3.org/2000/svg”>*

*<circle id=”acircle” cx=”50″ cy=”50″ r=”50″ fill=”green” />*

*</svg>*

*</body>*

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**What’s the difference between SVG and Canvas?**

Although both SVG (Scalable Vector Graphics) and Canvas can be used to draw and render graphics as part of HTML page but you must understand the following before choosing any one of them.

* SVG is vector-based image format. If we draw something using SVG can be manipulated and rendered again. On the other hand, Canvas manipulates pixels. So, it’s not possible to access pixels and manipulate them.
* As SVG is defined in an XML, it’s possible to attach an event handler to SVG element. But we can’t attach an event to canvas because of the same above reason i.e. it just draws pixels and no manipulation possible.
* SVG is independent of the resolution as compared to Canvas that is totally resolution dependent.
* As SVG facilitates manipulation, so it’s slow as compared to canvas. Canvas being fast considered to be the better choice for games.

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**Can you please provide an example of using <canvas> element in HTML5?**

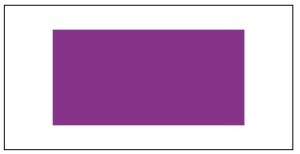
As we understand that <canvas> element is new to HTML 5 and can be used to draw graphics by using scripting language i.e. JavaScript. Here is an example of using <canvas> element in HTML 5:

*<canvas id=”myDrawingArea” width=”300″ height=”150″ style=”border:1px solid #000000;”>*  
*Canvas not supported.*  
*</canvas>*

*<script>*

*var mycanvas = document.getElementById(“myDrawingArea”);*  
*var ctx = mycanvas.getContext(“2d”);*  
*ctx.fillStyle=”#873389″;*  
*ctx.fillRect(50,25,200,100);*

*</script>*

It will draw a rectangle almost in the middle of HTML5 canvas area as see below:[](http://www.webdevelopmenthelp.net/wp-content/uploads/2014/09/Canvas.jpg)  
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**What specific methods are used to draw a line on a Canvas?**

In order to draw a straight line on a Canvas in HTML5, following methods are used:

* moveTo(x,y) – co-ordinates of the starting point for the line
* lineTo(x,y) – co-ordinates of the ending point for the line
* stroke() – line is actually drawn.

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**How to draw an image on a Canvas in HTML5??**

In order to draw an image on a Canvas in HTML5, drawImage() method is used. It has following three different overloads:

* **context.drawImage(image, cx, cy)**

*where cx = Canvas X, Canvas Y*

* **context.drawImage(image, ix, iy, iw, ih)**

*where ix = Image X, iy = Image Y, iw = Image Width, ih = Image Height*

* **context.drawImage(image, ix, iy, iw, ih, cx, cy, cw, ch)**

*where ix = Image X, iy = Image Y, iw = Image Width, ih = Image Height*  
*and cx = Canvas X, cy = Canvas Y, cw = Canvas Width, ch = Canvas Height*

*var mycanvas = document.getElementById(“myDrawingArea”);*  
*var ctx = mycanvas.getContext(“2d”); var img = new Image();*  
*img.onload = function ()  
{  
           ctx.drawImage(img, 0, 0);  
}  
img.src = “images/web.png”;*

**What is SVG and advantages of SVG?**

SVG is a language for describing two-dimensional vector graphics in XML.

SVG stands for Scalable Vector Graphics  
SVG is used to define vector-based graphics for the Web  
SVG defines the graphics in XML format  
SVG graphics do NOT lose any quality if they are zoomed or resized  
Every element and every attribute in SVG files can be animated  
SVG is a W3C recommendation

Code Example:

<?xml version=”1.0″ standalone=”no”?>  
<!DOCTYPE svg PUBLIC “-//W3C//DTD SVG 1.1//EN”  
“<http://www.w3.org/Graphics/SVG/1.1/DTD/svg11.dtd&#8221>;[&gt](http://www.w3.org/Graphics/SVG/1.1/DTD/svg11.dtd%E2%80%9D&gt);

<svg xmlns=”<http://www.w3.org/2000/svg&#8221>; version=”1.1″>  
<circle cx=”100″ cy=”50″ r=”40″ stroke=”black”  
stroke-width=”2″ fill=”red” />  
</svg>

**Advantages:**

Advantages of using SVG over other image formats (like JPEG and GIF) are:

SVG images can be created and edited with any text editor  
SVG images can be searched, indexed, scripted, and compressed  
SVG images are scalable  
SVG images can be printed with high quality at any resolution  
SVG images are zoomable (and the image can be zoomed without degradation)

**Differences Between SVG and Canvas**:

SVG is a language for describing 2D graphics in XML.

Canvas draws 2D graphics, on the fly (with a 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.

**Difference between Transitional and Strict doctype.**

**Strict :** This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed.

**Transitional** : This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed.

**What are New Semantic/Structural Elements**  
HTML5 offers new elements for better structure:  
Tag Description  
<article> Defines an article  
<aside> Defines content aside from the page content  
<bdi> Isolates a part of text that might be formatted in a different direction from other text outside it  
<command> Defines a command button that a user can invoke  
<details> Defines additional details that the user can view or hide  
<dialog> Defines a dialog box or window  
<summary> Defines a visible heading for a <details> element  
<figure> Specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.  
<figcaption> Defines a caption for a <figure> element  
<footer> Defines a footer for a document or section  
<header> Defines a header for a document or section  
<hgroup> Groups a set of <h1> to <h6> elements when a heading has multiple levels  
<mark> Defines marked/highlighted text  
<meter> Defines a scalar measurement within a known range (a gauge)  
<nav> Defines navigation links  
<progress> Represents the progress of a task  
<ruby> Defines a ruby annotation (for East Asian typography)  
<rt> Defines an explanation/pronunciation of characters (for East Asian typography)  
<rp> Defines what to show in browsers that do not support ruby annotations  
<section> Defines a section in a document  
<time> Defines a date/time  
<wbr> Defines a possible line-break

**Q 1- What is the difference between HTML and HTML5 ?**  
Ans: HTML5 is nothing more then upgraded version of HTML where in HTML5 Lot of new future like Video, Audio/mp3, date select function , placeholder , Canvas, 2D/3D Graphics, Local SQL Database added so that no need to do external plugin like Flash player or other library  
**Q 2- What is the <!DOCTYPE> ? Is it necessary to use in HTML5 ?**  
Ans: The <!DOCTYPE> is an instruction to the web browser about what version of HTML the page is written in. AND The <!DOCTYPE> tag does not have an end tag and It is not case sensitive.  
The <!DOCTYPE> declaration must be the very first thing in HTML5 document, before the <html> tag. As In HTML 4.01, all <! DOCTYPE > declarations require a reference to a Document Type Definition (DTD), because HTML 4.01 was based on Standard Generalized Markup Language (SGML). WHERE AS HTML5 is not based on SGML, and therefore does not require a reference to a Document Type Definition (DTD).  
**Q 3- How many New Markup Elements you know in HTML5**  
Ans: Below are the New Markup Elements added in HTML5  
Tag Description  
<article> Specifies independent, self-contained content, could be a news-article, blog post, forum post,  
or other articles which can be distributed independently from the rest of the site.  
<aside> For content aside from the content it is placed in. The aside content should  
be related to the surrounding content  
<bdi> For text that should not be bound to the text-direction of its parent elements  
<command> A button, or a radiobutton, or a checkbox  
<details> For describing details about a document, or parts of a document  
<summary> A caption, or summary, inside the details element  
<figure> For grouping a section of  
stand-alone content, could be a video  
<figcaption> The caption of the figure section  
<footer> For a footer of a document or section, could include the name of the author, the  
date of the document, contact information, or copyright information  
<header> For an introduction of a document or section, could include navigation  
<hgroup> For a section of headings, using <h1> to <h6>, where the largest is the main  
heading of the section, and the others are sub-headings  
<mark> For text that should be highlighted  
<meter> For a measurement, used only if the maximum and minimum values are known  
<nav> For a section of navigation  
<progress> The state of a work in progress  
<ruby> For ruby annotation (Chinese notes or characters)  
<rt> For explanation of the ruby annotation  
<rp> What to show browsers that do not support the ruby element  
<section> For a section in a document. Such as chapters, headers, footers, or any  
other sections of the document  
<time> For defining a time or a date, or both  
<wbr> Word break. For defining a line-break opportunity.  
**Q 4- What are the New Media Elements in HTML5? is canvas element used in HTML5**  
Ans: Below are the New Media Elements have added in HTML5  
Tag Description  
<audio> For multimedia content, sounds, music or other audio streams  
<video> For video content, such as a movie clip or other video streams  
<source> For media resources for media elements, defined inside video or audio  
elements  
For embedded content, such as a plug-in  
<track> For text tracks used in mediaplayers  
we can use Canvas element in html5 like <canvas></canvas>  
**Q 5- Do you know New Input Type Attribute in HTML5**  
Ans: we can use below new input type Attribute in HTML5  
Type Value  
tel The input is of type telephone number  
search The input field is a search field  
url a URL  
email One or more email addresses  
datetime A date and/or time  
date A date  
month A month  
week A week  
time The input value is of type time  
datetime-local A local date/time  
number A number  
range A number in a given range  
color A hexadecimal color, like #82345c  
placeholder Specifies a short hint that describes the expected value of an input field  
**Q 6- How to add video and audio in HTML5**  
Ans: The canvas element is used to draw graphics images on a web page by using javascript like below  
Like below we can add video in html5  
1. <video width=“320″ height=“240″ controls=“controls”>  
2. <source src=“mysong.mp4″ type=“video/mp4″ />  
3. <source src=“mysong.ogg” type=“video/ogg” />  
4. </video>  
And audio like this  
1. <audio controls=“controls”>  
2. <source src=“mysong.ogg” type=“audio/ogg” />  
3. <source src=“mysong.mp3″ type=“audio/mpeg” />  
4. </audio>  
**Q 7- What is the use of localStorage in HTML5?**  
Ans: Before HTML5 LocalStores was done with cookies. Cookies are not very good for large amounts of data, because they are passed on by every request to the server, so it was very slow and in-effective.  
In HTML5, the data is NOT passed on by every server request, but used ONLY when asked for. It is possible to store large amounts of data without affecting the website’sperformance.and The data is stored in different areas for different websites, and a website can only access data stored by itself.  
And for creating localstores just need to call localStorage object like below we are storing name and address  
1. <script type=“text/javascript”>  
2. localStorage.name=“PHPZAG”;  
3. document.write(localStorage.name);  
4. </script>  
5. <script type=“text/javascript”>  
6. localStorage.address=“Newyork USA”;  
7. document.write(localStorage.address);  
8. </script>  
**Q 8- What is the sessionStorage Object in html5 ? How to create and access?**  
Ans: The sessionStorage object stores the data for one session. The data is deleted when the user closes the browser window. like below we can create and access a sessionStorage here we created “name” as session  
1. <script type=“text/javascript”>  
2. sessionStorage.name=“PHPZAG”;  
3. document.write(sessionStorage.name);  
4. </script>  
**Q 9- What the use of Canvas Element in HTML5?**  
Ans: The canvas element is used to draw graphics images on a web page by using javascript like below  
1. <canvas id=“pcdsCanvas” width=“500″ height=“400″>  
2. </canvas>  
3. <script type=“text/javascript”>  
4. var pcdsCanvas=document.getElementById(“phpzagCanvas”);  
5. var pcdsText=pcdsCanvas.getContext(“2d”);  
6. pcdsText.fillStyle=“#82345c”;  
7. pcdsText.fillRect(0,0,150,75);  
8. </script>  
**Q 10- What purpose does HTML5 serve?**  
Ans: HTML5 is the proposed next standard for HTML 4.01, XHTML 1.0 and DOM Level 2 HTML. It aims to reduce the need for proprietary plug-in-based rich internet application (RIA) technologies such as Adobe Flash, Microsoft Silverlight, Apache Pivot, and Sun JavaFX.  
**Q 11- What is the difference between HTMl5 Application cache and regular HTML browser cache?**  
Ans: HTML5 specification allows browsers to prefetch some or all of a website assets such as HTML files, images, CSS, JavaScript, and so on, while the client is connected. It is not necessary for the user to have accessed this content previously, for fetching this content. In other words, application cache can prefetch pages that have not been visited at all and are thereby unavailable in the regular browser cache. Prefetching files can speed up the site’s performance, though you are of course using bandwidth to download those files initially.  
**Q 12- HOW DO YOU PLAY A AUDIO USING HTML5?**  
Ans:  
We can display audio using the tag as shown below:  
1. <audio controls=“controls”>  
2. <source src=“test.mp3″ type=“audio/mp3″ />  
3. </audio>  
**Q 13- WHAT ARE THE DIFFERENT TYPES OF STORAGE IN HTML5?**  
Ans:  
HTML5 offers two new objects for storing data on the client:  
LocalStorage – stores data with no time limit  
1. <script type=“text/javascript”>  
2. localStorage.lastname=“ZAG”;  
3. document.write(localStorage.lastname);  
4. </script>  
SessionStorage – stores data for one session.The data is deleted when the user closes the browser window.  
1. <script type=“text/javascript”>  
2. sessionStorage.lastname=“ZAG”;  
3. document.write(sessionStorage.lastname);  
4. </script>  
**Q 14- HOW DO YOU PLAY A VIDEO USING HTML5?**  
Ans:  
We can display video using the tag as shown below:  
1. <video width=“320″ height=“240″ controls=“controls”>  
2. <source src=“test.mp4″ type=“video/mp4″ />  
3. </video>  
**Q 15- WHAT ARE THE NEW APIS PROVIDED BY THE HTML 5 STANDARD? GIVE A BRIEF DESCRIPTION OF EACH?  
Ans:**  
The canvas element: Canvas consists of a drawable region defined in HTML code with height and width attributes. JavaScript code may access the area through a full set of drawing functions similar to other common 2D APIs, thus allowing for dynamically generated graphics. Some anticipated uses of the canvas include building graphs, animations, games, and image composition.  
• Timed media playback  
• Offline storage database  
• Document editing  
• Drag-and-drop  
• Cross-document messaging  
• Browser history management  
• MIME type and protocol handler registration  
**Q 16- WHAT OTHER ADVANTAGES DOES HTML5 HAVE?  
Ans:**  
a) Cleaner markup  
b) Additional semantics of new elements like <header>, <nav>, and <time>  
c) New form input types and attributes that will (and in Opera’s case, do) take the hassle out of scripting forms.  
**Q 17- GIVE AN EXAMPLE OF NEW ELEMENTS IN HTML5 TO SUPPORT MULTIMEDIA AND GRAPHICS?  
Ans:** HTML5 introduced many elements such as , instead of  
**Q 19- WHAT IS THE DIFFERENCE BETWEEN HTML5 APPLICATION CACHE AND REGULATE HTML BROWSER CACHE?  
Ans:**  
The new HTML5 specification allows browsers to prefetch some or all of a website assets such as HTML files, images, CSS, JavaScript, and so on, while the client is connected. It is not necessary for the user to have accessed this content previously, for fetching this content. In other words, application cache can prefetch pages that have not been visited at all and are thereby unavailable in the regular browser cache. Prefetching files can speed up the site’s performance, though you are of course using bandwidth to download those files initially.  
**Q 20- WHAT PURPOSE DOES HTML5 SERVE?  
Ans:**  
HTML5 is the proposed next standard for HTML 4.01, XHTML 1.0 and DOM Level 2 HTML. It aims to reduce the need for proprietary plug-in-based rich internet application (RIA) technologies such as Adobe Flash, Microsoft Silver light, Apache Pivot, and Sun JavaFX.  
**Q 21 – WHAT IS THE STATUS OF THE DEVELOPMENT OF THE HTML 5 STANDARD?  
Ans:** HTML5 is being developed as the next major revision of HTML (HyperText Markup Language), the core markup language of the World Wide Web. The Web Hypertext Application Technology Working Group (WHATWG) started work on the specification in June 2004 under the name Web Applications 1.0.[1] As of March 2010[update], the specification is in the Draft Standard state at the WHATWG, and in Working Draft state at the W3C.

**What is HTML5?  
Ans :** HTML5 is The New HTML Standard with new elements, attributes, and behaviors.

———————————————————————————————-  
**HTML 5 Features:  
Ans :**  
1. The <canvas> element for 2D drawing  
2. The <video> and <audio> elements for media playback  
3. local storage support.  
4. Added New elements, like <figure>,<small>, <header>, <nav>,<article>, <footer>, <section>,<mark>  
5. New form controls, like placeholder,calendar, date, time, email, url, search,required ,autofocus  
6. In HTML5 there is only one <!doctype> declaration: <!DOCTYPE html>  
———————————————————————————————-  
**What is HTML5 Web Storage?  
Ans :** In HTML5, we can store data locally within the user’s browser.It is possible to store large amounts of data without affecting the website’s performance.  
Web Storage is more secure and faster.  
there are two types of Web Storages  
1.LocalStorage:stores data locally with no limit  
2.SessionStorage:stores data for one session

———————————————————————————————-  
How to store data on client in HTML5?  
Ans : we can store data using HTML5 Web Storage.

1.LocalStorage

<script type=”text/javascript”>  
localStorage.name=”Raj”;  
document.write(localStorage.name);  
</script>

2.SessionStorage  
<script type=”text/javascript”>  
sessionStorage.email=”test@gmail.com”;  
document.write(sessionStorage.email);  
</script>

———————————————————————————————-  
**How do you play a Video using HTML5?**

Ans : HTML5 defines a new element to embed a video on Web Page  
the <video> element.

Example:  
<video width=”500″ height=”300″ controls>  
<source src=”video1.mp4″ type=”video/mp4″>  
</video>

———————————————————————————————-  
How do you play a Audio using HTML5?

Ans : HTML5 defines a new element to embed a video on Web Page  
the <audio> element.

Example:  
<audio controls>  
<source src=”audio.mp3″ type=”audio/mpeg”>  
</audio>

———————————————————————————————-  
Canvas Element in HTML5?  
Ans : The canvas element is used to draw graphics images on a web page

<canvas id=”canvas\_image” width=”400″ height=”200″></canvas>

The canvas is a two-dimensional grid.

———————————————————————————————-  
HTML5 <input> Types ?  
Ans :  
• search  
• tel  
• time  
• color  
• email  
• month  
• date  
• datetime  
• datetime-local  
• number  
• range  
• url  
• week

———————————————————————————————-  
**HTML5 New Form Attributes?  
Ans :**  
• pattern  
• placeholder  
• required  
• step  
• autocomplete  
• autofocus  
• height and width  
• list  
• min and max  
• multiple  
• form  
• formaction  
• formenctype  
• formmethod  
• formnovalidate  
• formtarget  
———————————————————————————————-  
**What does a <hgroup> tag do?**

Ans : The <hgroup> tag is used to group heading elements.  
The <hgroup> element is used to group a set of <h1> to <h6> elements.

<hgroup>  
<h1>Hello</h1>  
<h2>How r u?</h2>  
</hgroup>

———————————————————————————————-  
**Which video formats are used for the video element?  
Ans :**  
Internet Explorer 9+: MP4  
Chrome 6+: MP4, WebM, Ogg  
Firefox 3.6+ : WebM, Ogg  
Safari 5+ : MP4,  
Opera 10.6+ : WebM,Ogg

———————————————————————————————-  
**Difference between HTML4 and HTML5**  
———————————————————————————————-  
What is the <!DOCTYPE> ? Is it necessary to use in HTML5 ?  
Ans : The <!DOCTYPE> declaration must be the very first thing in HTML5 document, before the <html> tag

———————————————————————————————-  
**What are the New Media Elements in HTML5?  
Ans :**  
• <audio>  
• <video>  
• <source>  
•  
• <track>  
**1 :: What is the status of the development of the HTML 5 standard?**  
HTML5 is being developed as the next major revision of HTML (HyperText Markup Language), the core markup language of the World Wide Web. The Web Hypertext Application Technology Working Group (WHATWG) started work on the specification in June 2004 under the name Web Applications 1.0. As of March 2010, the specification is in the Draft Standard state at the WHATWG, and in Working Draft state at the W3C.

**2 :: What are the new APIs provided by the HTML 5 standard? Give a brief description of each**  
► The canvas element: Canvas consists of a drawable region defined in HTML code with height and width attributes. JavaScript code may access the area through a full set of drawing functions similar to other common 2D APIs, thus allowing for dynamically generated graphics. Some anticipated uses of the canvas include building graphs, animations, games, and image composition.  
► Timed media playback  
► Offline storage database  
► Document editing  
► Drag-and-drop  
► Cross-document messaging  
► Browser history management  
► MIME type and protocol handler registration

**3 :: What purpose does HTML5 serve?**  
HTML5 is the proposed next standard for HTML 4.01, XHTML 1.0 and DOM Level 2 HTML. It aims to reduce the need for proprietary plug-in-based rich internet application (RIA) technologies such as Adobe Flash, Microsoft Silverlight, Apache Pivot, and Sun JavaFX.

**4 :: What other advantages does HTML5 have?**  
► Cleaner markup  
► Standardized approach to mobile devices support  
► Additional semantics of new elements like <header>, <nav>, and <time>  
► New form input types and attributes that will (and in Opera’s case, do) take the hassle out of scripting forms.

**5 :: WHAT IS THE DIFFERENCE BETWEEN HTML5 APPLICATION CACHE AND REGULATE HTML BROWSER CACHE?**  
The new HTML5 specification allows browsers to prefetch some or all of a website assets such as HTML files, images, CSS, JavaScript, and so on, while the client is connected. It is not necessary for the user to have accessed this content previously, for fetching this content. In other words, application cache can prefetch pages that have not been visited at all and are thereby unavailable in the regular browser cache. Prefetching files can speed up the site’s performance, though you are of course using bandwidth to download those files initially.

**6 :: WHAT IS HTML5?**  
HTML5 is the latest version of HTML standard supporting multimedia and graphical content.  
1

**7 :: GIVE AN EXAMPLE OF NEW ELEMENTS IN HTML5 TO SUPPORT MULTIMEDIA AND GRAPHICS?**  
HTML5 introduced many elements such as , instead of to support multimedia.  
1

**8 :: Explain WHAT OTHER ADVANTAGES DOES HTML5 HAVE?**  
a) Cleaner markup  
b) Additional semantics of new elements like <header>, <nav>, and <time>  
c) New form input types and attributes that will (and in Opera’s case, do) take the hassle out of scripting forms.  
1

**9 :: HOW DO YOU PLAY A VIDEO USING HTML5?**  
We can display video using the tag as shown below:

<video width=“320″ height=“240″ controls=“controls”>  
<source src=“test.mp4″ type=“video/mp4″ />  
</video>  
1

**10 :: WHAT ARE THE DIFFERENT TYPES OF STORAGE IN HTML5?**  
HTML5 offers two new objects for storing data on the client:

LocalStorage – stores data with no time limit

<script type=“text/javascript”>  
localStorage.lastname=“ZAG”;  
document.write(localStorage.lastname);  
</script>

SessionStorage – stores data for one session.The data is deleted when the user closes the browser window.

<script type=“text/javascript”>  
sessionStorage.lastname=“ZAG”;  
document.write(sessionStorage.lastname);  
</script>

**11 :: HOW DO YOU PLAY A AUDIO USING HTML5?**  
We can display audio using the tag as shown below:

<audio controls=“controls”>  
<source src=“test.mp3″ type=“audio/mp3″ />  
</audio>

**12 :: What is the difference between HTMl5 Application cache and regular HTML browser cache?**  
HTML5 specification allows browsers to prefetch some or all of a website assets such as HTML files, images, CSS, JavaScript, and so on, while the client is connected. It is not necessary for the user to have accessed this content previously, for fetching this content. In other words, application cache can prefetch pages that have not been visited at all and are thereby unavailable in the regular browser cache. Prefetching files can speed up the site’s performance, though you are of course using bandwidth to download those files initially.

**13 :: Tell me What purpose does HTML5 serve?**  
HTML5 is the proposed next standard for HTML 4.01, XHTML 1.0 and DOM Level 2 HTML. It aims to reduce the need for proprietary plug-in-based rich internet application (RIA) technologies such as Adobe Flash, Microsoft Silverlight, Apache Pivot, and Sun JavaFX.

**14 :: Can you explain What the use of Canvas Element in HTML5?**  
The canvas element is used to draw graphics images on a web page by using javascript like below

<canvas id=“pcdsCanvas” width=“500″ height=“400″>  
</canvas>  
<script type=“text/javascript”>  
var pcdsCanvas=document.getElementById(“phpzagCanvas”);  
var pcdsText=pcdsCanvas.getContext(“2d”);  
pcdsText.fillStyle=“#82345c”;  
pcdsText.fillRect(0,0,150,75);  
</script>

**15 :: Do you know What is the sessionStorage Object in html5? How to create and access?**  
The sessionStorage object stores the data for one session. The data is deleted when the user closes the browser window. like below we can create and access a sessionStorage here we created “name” as session

<script type=“text/javascript”>  
sessionStorage.name=“PHPZAG”;  
document.write(sessionStorage.name);  
</script>

**16 :: Explain What is the use of localStorage in HTML5?**  
Before HTML5 LocalStores was done with cookies. Cookies are not very good for large amounts of data, because they are passed on by every request to the server, so it was very slow and in-effective.

In HTML5, the data is NOT passed on by every server request, but used ONLY when asked for. It is possible to store large amounts of data without affecting the website’sperformance.and The data is stored in different areas for different websites, and a website can only access data stored by itself.

And for creating localstores just need to call localStorage object like below we are storing name and address

<script type=“text/javascript”>  
localStorage.name=“PHPZAG”;  
document.write(localStorage.name);  
</script>  
<script type=“text/javascript”>  
localStorage.address=“Newyork USA”;  
document.write(localStorage.address);  
</script>

**17 :: Tell me How to add video and audio in HTML5**  
The canvas element is used to draw graphics images on a web page by using javascript like below

Like below we can add video in html5

<video width=“320″ height=“240″ controls=“controls”>  
<source src=“mysong.mp4″ type=“video/mp4″ />  
<source src=“mysong.ogg” type=“video/ogg” />  
</video>

And audio like this

<audio controls=“controls”>  
<source src=“mysong.ogg” type=“audio/ogg” />  
<source src=“mysong.mp3″ type=“audio/mpeg” />  
</audio>

**18 :: Tell me Do you know New Input Type Attribute in HTML5**  
we can use below new input type Attribute in HTML5  
Type: Value:  
tel The input is of type telephone number  
search The input field is a search field  
url a URL  
email One or more email addresses  
datetime A date and/or time  
date A date  
month A month  
week A week  
time The input value is of type time  
datetime-local A local date/time  
number A number  
range A number in a given range  
color A hexadecimal color, like #82345c  
placeholder Specifies a short hint that describes the expected value of an input field

**19 :: Explain What are the New Media Elements in HTML5? is canvas element used in HTML5  
Below are the New Media Elements have added in HTML5**  
Tag Description  
<audio> For multimedia content, sounds, music or other audio streams  
<video> For video content, such as a movie clip or other video streams  
<source> For media resources for media elements, defined inside video or audio  
elements  
For embedded content, such as a plug-in  
<track> For text tracks used in mediaplayers

we can use Canvas element in html5 like <canvas></canvas>

**20 :: Explain How many New Markup Elements you know in HTML5**  
Below are the New Markup Elements added in HTML5  
Tag Description  
<article> Specifies independent, self-contained content, could be a news-article, blog post, forum post,  
or other articles which can be distributed independently from the rest of the site.  
<aside> For content aside from the content it is placed in. The aside content should  
be related to the surrounding content  
<bdi> For text that should not be bound to the text-direction of its parent elements  
<command> A button, or a radiobutton, or a checkbox  
<details> For describing details about a document, or parts of a document  
<summary> A caption, or summary, inside the details element  
<figure> For grouping a section of  
stand-alone content, could be a video  
<figcaption> The caption of the figure section  
<footer> For a footer of a document or section, could include the name of the author, the  
date of the document, contact information, or copyright information  
<header> For an introduction of a document or section, could include navigation  
<hgroup> For a section of headings, using <h1> to <h6>, where the largest is the main  
heading of the section, and the others are sub-headings  
<mark> For text that should be highlighted  
<meter> For a measurement, used only if the maximum and minimum values are known  
<nav> For a section of navigation  
<progress> The state of a work in progress  
<ruby> For ruby annotation (Chinese notes or characters)  
<rt> For explanation of the ruby annotation  
<rp> What to show browsers that do not support the ruby element  
<section> For a section in a document. Such as chapters, headers, footers, or any  
other sections of the document  
<time> For defining a time or a date, or both  
<wbr> Word break. For defining a line-break opportunity.  
21 :: Tell me What is the <!DOCTYPE>? Is it necessary to use in HTML5  
The <!DOCTYPE> is an instruction to the web browser about what version of HTML the page is written in. AND The <!DOCTYPE> tag does not have an end tag and It is not case sensitive.

The <!DOCTYPE> declaration must be the very first thing in HTML5 document, before the <html> tag. As In HTML 4.01, all <! DOCTYPE > declarations require a reference to a Document Type Definition (DTD), because HTML 4.01 was based on Standard Generalized Markup Language (SGML). WHERE AS HTML5 is not based on SGML, and therefore does not require a reference to a Document Type Definition (DTD).

**22 :: Explain the difference between HTML and HTML5**  
HTML5 is nothing more then upgraded version of HTML where in HTML5 Lot of new future like Video, Audio/mp3, date select function , placeholder , Canvas, 2D/3D Graphics, Local SQL Database added so that no need to do external plugin like Flash player or other library

**(1) What is the use of Canvas Element in HTML5?**  
HTML5 Canvas element can be used to draw graphics images on a web page by using javascript.  
**(2) Can you give an example of Canvas element how it can be used?**

<canvas id=“DGTCanvas” width=“500″ height=“400″>  
</canvas>  
<script type=“text/javascript”>  
var DGTCanvas=document.getElementById(“DGTCanvas”);  
var DGTText=DGTCanvas.getContext(“2d”);  
DGTText.fillStyle=“#82345c”;  
DGTText.fillRect(0,0,150,75);  
</script>  
**(3) What is the purpose of HTML5 versus XHTML?**  
HTML5 is the next version of HTML 4.01, XHTML 1.0 and DOM Level 2 HTML. It aims to reduce the need for proprietary plug-in-based rich internet application (RIA) technologies such as Adobe Flash, Microsoft Silverlight, Apache Pivot, and Sun JavaFX. Instead of using those plugins, it enables browser to serve elements such as video and audio without any additional requirements on the client machine.  
**(4) What is the difference between HTML and HTML5 ?**  
HTML5 is nothing more then upgraded version of HTML where in HTML5 supports the innovative features such as Video, Audio/mp3, date select function , placeholder , Canvas, 2D/3D Graphics, Local SQL Database added so that no need to do external plugin like Flash player or other library elemenents.  
**(5) WHAT are some other advantages of HTML5?**  
a) Cleaner markup than earlier versions of HTML  
b) Additional semantics of new elements like <header>, <nav>, and <time>  
c) New form input types and attributes that will (and in Opera’s case, do) take the hassle out of scripting forms.  
Related article on DGlobalTech.com  
• Flash versus HTML5  
• HTML5 – Video and Audio File formats and browser support  
• HTML Javascript online Realtime Editor  
**(6) What is the <!DOCTYPE>? Is it mandatory to use in HTML5?**  
The <!DOCTYPE> is an instruction to the web browser about what version of HTML the page is written in. The <!DOCTYPE> tag does not have an end tag. It is not case sensitive.  
The <!DOCTYPE> declaration must be the very first thing in HTML5 document, before the <html> tag. As In HTML 4.01, all <! DOCTYPE > declarations require a reference to a Document Type Definition (DTD), because HTML 4.01 was based on Standard Generalized Markup Language (SGML). WHERE AS HTML5 is not based on SGML, and therefore does not require a reference to a Document Type Definition (DTD).  
**(7) What are the New Media Elements in HTML5?**  
New Media Elements in HTML5 are :  
Tag Description  
<audio> For multimedia content, sounds, music or other audio streams  
<video> For video content, such as a movie clip or other video streams  
<source> For media resources for media elements, defined inside video or audio  
elements  
For embedded content, such as a plug-in  
<track> For text tracks used in mediaplayers  
**(8) What is the major improvement with HTML5 in reference to Flash?**  
Flash is not supported by major mobile devices such as iPad, iPhone and universal android applications. Those mobile devices have lack of support for installing flash plugins. HTML5 is supported by all the devices, apps and browser including Apple and Android products. Compared to Flash, HTML5 is very secured and protected. That eliminates major concerns that we have seen with Flash.  
**(10) What is the sessionStorage Object in html5 ? How you can create and access that?**  
The HTML5 sessionStorage object stores the data for one session. The data is deleted when the user closes the browser window. We can create and access a sessionStorage, created “name” as session  
<script type=“text/javascript”>  
sessionStorage.name=“DGTECH”;  
document.write(sessionStorage.name);  
</script>

**HTML5 – New Features**  
Some of the most interesting new features in HTML5:  
• The <canvas> element for 2D drawing  
• The <video> and <audio> elements for media playback  
• Support for local storage  
• New content-specific elements, like <article>, <footer>, <header>, <nav>, <section>  
New form controls, like calendar, date, time, email, url, search  
Questions : 1 What is the difference between CSS and CSS3 ?  
Answers : 1 CSS3 is upgreaded version of CSS with new future like Selectors,Box Model, Backgrounds and Borders, Text Effects,2D/3D Transformations, Animations, Multiple Column Layout,User Interface etc  
**Questions : 2 List out CSS3 modules**  
Answers : 2 Below are the listed major modules  
• Selectors  
• Box Model  
• Backgrounds and Borders  
• Text Effects  
• 2D/3D Transformations  
• Animations  
• Multiple Column Layout  
• User Interface  
**Questions : 3 What new futures added in CSS3 for Borders and how Browser Support it?**  
Answer : 3 following border futures added  
• border-radius  
• box-shadow  
• border-image

and all modern Browser Support it like below  
Internet Explorer 9 supports border-radius and box-shadow  
Firefox requires the prefix -moz- for border-image.  
Chrome and Safari requires the prefix -webkit- for border-image.  
Opera requires the prefix -o- for border-image.  
Questions : 4 How you will create Rounded Corners using css3  
Answer : 4 We have to creat a class like below  
<style>  
.roundc{  
border:2px solid #ff0000;  
border-radius:25px;  
background:#dddddd;  
width:300px;  
-moz-border-radius:25px; /\* Firefox \*/  
-webkit-border-radius:25px; /\* Chrome and Safari \*/  
-o-border-radius:25px; /\* Opera \*/  
}  
</style>  
and we have to add this class where we want the round corner like in below div  
<div class=”roundc” > this is the round corner by css3 </div>  
This is the div and round corner by css3  
Questions : 5 how we create border using images by CSS3  
Answers : 5 By using border-image: property of css3 we can create a border using images like below  
.roundpcds  
{  
border-image:url(borderpcds.png) 30 30 round;  
-moz-border-image:url(borderpcds.png) 30 30 round; /\* Firefox \*/  
-webkit-border-image:url(borderpcds.png) 30 30 round; /\* Safari and Chrome \*/  
-o-border-image:url(borderpcds.png) 30 30 round; /\* Opera \*/  
}  
.stretchPcds  
{  
-moz-border-image:url(borderpcds.png) 30 30 stretch; /\* Firefox \*/  
-webkit-border-image:url(borderpcds.png) 30 30 stretch; /\* Safari and Chrome \*/  
-o-border-image:url(borderpcds.png) 30 30 stretch; /\* Opera \*/  
border-image:url(borderpcds.png) 30 30 stretch;  
}  
Questions : 6 How you will create Box Shadow and text Shadow using CSS3 Answers : 6 Like below we can create Box Shadow using CSS3 .boxshadowpcds  
{  
box-shadow: 10px 10px 5px #ccccc;  
}  
.textshadowpcds  
{  
text-shadow: 5px 5px 5px #FF0000;  
} and then need to use these class boxshadownpcds ,textshadowpcds  
Questions : 7 What is the CSS3 The background size Property  
Answers : 7 The background-size property specifies the size of the background image.  
As we know Before CSS3, the background image size was find out by the real size of the image. In CSS3 it is possible to specify the size of the background image, which allows you to re-use background images in different ways.  
.pcdsbp1  
{  
background:url(background.gif);  
-moz-background-size:80px 60px; /\* Firefox 3.6 \*/  
background-size:80px 60px; /\* or we can do background-size:100% 100%;\*/  
background-repeat:no-repeat;  
}  
**Questions : 8 What is the word wrap / word wrapping in CSS3 ?**  
Answers : 8 to Allow long words to be able to break and wrap onto the next line in css3 we used word-wrap property like below class  
.wordwrappcds{word-wrap:break-word;}  
**Questions : 9 What is the CSS3 animation ?**  
Answers : 9  
When the animation is created in the @keyframe, bind it to a selector, otherwise the animation will have no effect.  
Bind the animation to a selector by specifying at least these two CSS3 animation properties:  
• Specify the name of the animation  
• Specify the duration of the animation