HTML

1. What is DOCTYPE in HTML?

It is an instruction to the web browser using what version of HTML the page is written.

2. Why DOCTYPE is important? What happens when we don't write DOCTYPE?

DOCTYPE ensures that the browser renders the page in standard mode, Otherwise the page renders in Quirks mode in which some of the HTML-5 features doesn't support.

3. What is <meta> tag in HTML?

The <meta> tag provides meta data about the HTML document like- charSet, page description, keywords, author of the document, last modified.

4. Div vs span?

- <div> is a block level element but <span> is an inline element.
- Block level element occupies the complete width of the screen but inline element occupies only the required space.
- Width and height can be applied to block level elements but width, height can't be applied to inline elements.

5. What is alt attribute in <img>

Alt attribute adds an alternate text for an image, if the image cannot be displayed.

6. dropdown vs datalist?

- Datalist includes autocomplete and suggestions,
- Data List is a new HTML tag in HTML5.
- It renders a text box with some list of options.

7. What are new elements to add in HTML5 ?

New Input Types	New Input Attributes
- Color - date - datetime - datetime-local - email - month - number - range - search - tel - time - url	- autocomplete - autofocus - form - formaction - formenctype - formmethod - formnovalidate - formtarget - height and width - list - min and max - multiple - pattern (regexp)

● week	● placeholder ● required ● step

8. What are new APIs available in html5?

- Geo-Location
- Drag and drop
- Offline storage
- Application cache

9. What are semantic elements?

- A semantic element clearly describes its meaning to both the browser and the developer.
- Examples of semantic elements: <form>, <table>, and <article> - Clearly defines its content.

10. Which type of video formats are supported by HTML5

- Mp4
- Webm
- Ogg

11. Which type of Audio formats are supported by HTML5

- Mp3
- Wav
- ogg

12. What is the difference between form get and form post?

GET requests can be cached

GET requests remain in the browser history

GET requests can be bookmarked

GET requests should never be used when dealing with sensitive data

GET requests have length restrictions

GET requests should be used only to retrieve data

POST requests are never cached

POST requests do not remain in the browser history

POST requests cannot be bookmarked

POST requests have no restrictions on data length

13. What all New Features added in HTML-5?

- Semantic Elements - <header><footer><section><article>
- Input Types – number,email,search,tel,month,
- Multimedia tags - <audio> <video>
- SVG , Canvas
- Local-storage and session-storage

Canvas	SVG
- Resolution dependent - No support for event handlers - Poor text rendering capabilities - We can save the resulting image as .png or .jpg - Well suited for graphic-intensive games	- Resolution independent - Support for event handlers - Best suited for applications with large rendering areas (Google Maps) - Slow rendering if complex (anything that uses the DOM a lot will be slow) - Not suited for game applications

14. What is Web-workers in HTML 5?

A web worker is a JavaScript that runs in the background, independently of other scripts, without affecting the performance of the page. You can continue to do whatever you want: clicking, selecting things, etc., while the web worker runs in the background.

15. Localstorage vs sessionstorage?
- Session storage data gets deleted when the session is over or tab is closed.
- data stored in localStorage has no expiration time. It remains there even after the tab is closed.

16. 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:
  Offline browsing – Web users can also use the application when they are offline.
  Speed – Cached resources load quicker
  Reduce the server load – The web browser will only download updated resources from the server.

17. What is a manifest file?

A Manifest file is a simple text file, that tells the browser what to cache and what not to cache.

A Manifest file contains three Sections.
a. CACHE MANIST   b. NETWORK   c.FALLBACK

18. Why Server Side Events?

- It enables a webpage to get updates from a server automatically
- examples are news feeds, sports results that run continuously on media websites, Facebook/Twitter updates and so on.

19. What is image map?

- **Image mapping** lets a user to link one image to different web pages in and out of the website. It is the process of defining special shapes inside an image and link it to different destinations
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CSS

1. Visibility:hidden vs display:none;

Visibility:hidden hides the element from page but it occupies the space
display:none hides the element from page and doesn't occupy any space.

2. Display:block vs display:Inline

Display: inline will display block level elements as inline but width,height cannot be applied.
Display:block elements can have width and height.

3. what are the Combinator in css3?

>   child selector
space   inside selector
+   Immediate Selectors
~   sibling selector

4.what are the Pseudo classes in css3?

: colon
ex- div:hover
:hover
:first-child
:last-child
:nth child

5.what are the Pseudo elements in css3?

:: Pseudo Elements
::after
::before
::first-letter
::first-line
::selection

6.what is box-sizing?

- The CSS box-sizing property allows us to include the padding and border in an element's total width and height.
- Elements with box-sizing: content-box become wider when they have padding and/or border. To avoid this problem, make use of the box-sizing: border-box

7.what is box-model and why in used ?

All HTML elements can be considered as boxes. In CSS, the term "box model" is used when talking about design and layout.
The CSS box model is essentially a box that wraps around every HTML element. It consists of: margins, borders, padding, and the actual content. The image below illustrates the box model:

8.what is flexbox?

The "Flexible Box" or "Flexbox" layout mode offers an alternative to Floats for defining the overall appearance of a web page. Whereas floats only let us horizontally position our boxes, flexbox gives us complete control over the alignment, direction, order, and size of our boxes.

9. what is Transition?

CSS transitions allows you to change property values smoothly (from one value to another), over a given duration.

10. what is Image Sprites?

-An image sprite is a collection of images put into a single image.
-A web page with many images can take a long time to load and generates multiple server requests.
-Using image sprites will reduce the number of server requests and save bandwidth.

11. what is Media Queries?

-Media query is a CSS technique introduced in CSS3.
-Used to design responsive webpages.
-It uses the @media rule to include a block of CSS properties only if a certain condition is true.

13. why float properties to used in css?

The CSS float property specifies how an element should float.

14.different between float vs clear?

float

The CSS float property specifies how an element should float.
clear

The CSS clear property specifies what elements can float beside the cleared element and on which side.

16.position relative vs position absolute?

position: relative

An element with position: relative; is positioned relative to its normal position.

Setting the top, right, bottom, and left properties of a relatively-positioned element will cause it to be adjusted away from its normal position. Other content will not be adjusted to fit into any gap left by the element.

position: absolute

An element with position: absolute; is positioned relative to the nearest positioned ancestor (instead of positioned relative to the viewport, like fixed).
However; if an absolute positioned element has no positioned ancestors, it uses the document body, and moves along with page scrolling.
Note: A "positioned" element is one whose position is anything except static.

17.what is Opacity?

The opacity property specifies the transparency of an element.
-The lower the value, the more transparent.
-value should be in a range (0.0 to 1.0)
1 is not transparent at all, 0.5 is 50% transparent, and 0 is completely transparent
- 1 is default opacity value for every element.

18.margin vs padding?

 Margins

The CSS margin properties are used to create space around elements, outside of any defined borders.

 Padding

The CSS padding properties are used to generate space around an element's content, inside of any defined borders.

19. why used in z-index in css?

The z-index property specifies the stack order of an element. An element with greater stack order is always in front of an element with a lower stack order.
Note: z-index only works on positioned elements (position: absolute, position: relative, position: fixed, or position: sticky.

20.why I am using in css elements in our project?

for styling proposes to used in css

21. different between width vs max-width?

JAVSCRIPT

1. What all Data types we have in Javascript?

   Types of data we are dealing with

Primitive	Non-primitive/Complex
1. number	1. function
2. string	2. Object
3. boolean(true,false)	
4. undefined(undefined)	
5. null	

2. Null vs Undefined

   when a variable is declared without a value, that variable by default will have

   undefined value, a variable can be declared with a null value.

   ```
   var a;              //a=undefined
   var b = null;  //b=null
   ```

   null is assigned as a value to a variable, but undefined gets assigned to a variable   by default

   datatype of null is 'object' whereas datatype of undefined is 'undefined'

3. == vs ===

   == compares only value

   == compares both value and Datatype

4.