1] What is HTML and what is its purpose?

HTML is a Hypertext Markup language for creating web pages & it describes the structure of a web page.

2] What is the difference b/w HTML & XHTML ?

XHTML	HTML
* It includes HTML & XML features.	* It is easy to code in html.
* It is a better version of HTML	* It can be used on older web browsers.
* It is case-sensitive (lower case)	* It supports multimedia elements.
* Doctype is necessary	* not a case-sensitive.
* .xhtml, .xml extension is used	* Doctype is not necessary.
	* .html extension is used.

3] What are the new features introduced in HTML5 ?

* It allows to embed a vedio or audio on the website.
* It supports to draw graphics of various size & color
* It contains placeholder attribute, Nav tag to link different pages.

4] How do you include comments in HTML ?

<!-- Comments --> is used to comment.

5] Explain the difference b/w & <Span> tags.

 tag is used for block level organization & styling of page elements. It will take whole line.

<Span> is used for inline elements. It is known as inline tag. It will not take whole line.

6) What are semantic elements in HTML5 & why are they important?
Semantic elements define different parts of Web page.
Semantic elements = elements with a meaning.
eg: <form>, <table>, ...

7) What is the purpose of the <header>, <nav>, <section>, & <footer> tags in html 5?
<header> - It represents a container for intruction content & navigation links. It contain heading elements, logo or icon, authorship information.
<nav> - purpose is to provide navigation links within the current document or to other documents.
<Section> - It defines a section in a document. It may contain headers, footers, paragraph....
<footer> - It defines the footer of HTML document / Section.

8) How do you create a hyperlink in HTML?
using anchor tag i.e. <a> which included href to add URL.

9) what is the d/f b/w <ol> & elements?
In <ol> the elements are displayed with numbers, Roman numbers or letters.
In <ul> the elements are displayed in bulleted list.

10) How do you embed an image in HTML?
using <img/> tag and giving the path in the src.

11) Explain the difference b/w the <Strong> & tags.
<Strong> - It will make the text bold.
 - It will italics the text.

12] How do you create a table in HTML
using <table></table> tag. In which <tr></tr> is used to create row & <td> to insert data

13] what is the purpose of the <form> tag in HTML & how do you create a form?
Form tag is used to create an HTML form for user input
(or) used to send the information from local folder to html website. Using input tag we can create form.

14] what are some new input types introduced in HTML5?
Several input types like Date, DateTime-local, time, week, month, email, tel, URL, Search, range, color & number.

15] How do you include audio & video content in HTML?
<audio></audio> & <video></video> tag is used to include audio & video through src attribute.

16] What is the purpose of the <iframe> tag & how is it used? iframe - inline frame.
<iframe> tag is used to embed another document within the current HTML document.

17] How do you add CSS styles to HTML elements?
Inside the <head> tag <Style> tag is written inside that CSS styles were added.

18] What is the role of the alt attribute in <img> tags?
It will give alternative information for the image if the user cannot view the image.

19] How do you create a numbered list with custom numbering styles in HTML?

We can create an ordered list using the tag & define list items using inside <li> specify type="1". This will create numbered list starting from 1.

20] what is the difference b/w <script async> & <script defer>?

<script async> - It allows the script to run as soon as it's loaded without blocking the elements on the page.

<script defer> - It will only execute after the page has finished loading.

21] what is responsive web design, & why is it important?

Responsive web design involves creating web pages that fits well across a variety of devices & screen sizes.

It is important because it will make web page mobile-friendly & improve the way it looks on devices.

22] How do you make a website responsive using css?

To make an HTML page to be responsive, the viewport meta tag has to be included. This sets the page width to device-width & initial zoom to 1.

23] What is a media query in css, & how is it used for responsive design?

media query is a css technique used to include a block of css properties if the condition is true.

Media query allow to create different layouts depending on the size of the viewport.

24) Explain the difference b/w a fluid layout & a fixed layout in terms of responsiveness.

fixed layout :- These are layouts with fixed width in pixels. resizing the browser won't affect the look of website

fluid layout :- These are layouts with width in percentage. It will align elements automatically & adjust the alignment & proportions for d/f page sizes & orientations

25) How do you make images responsive in CSS?

By setting the width of the image ~~in percentage~~ to a percentage of its parent container. In this way when the parent container size changes the image size will also change.

26) what are breakpoints in responsive design, & how are they determined?

It is the point at which a website's content & design will adapt in a certain way to provide the best user experience

27) How can you hide elements on specific screen size using CSS?

By setting the display property to none.

28) what is the purpose of the max-width property in responsive CSS?

It sets the maximum width of an element. It prevents the used value of the width propesty from becoming larger than the value specified by max-width.

29] How do you create a responsive navigation menu using CSS?

* first we have to create html structure for navigation menu using unordered list for each menu item.
* Then we have to apply basic styling for navigation menu by setting the display to 'inline-block' or flex to align items horizontally.
* By using media queries make the navigation menu responsive & adjust css properties based on screen width.
* for small screen add a checkbox & label element. use css to hide the checkbox & style the label as button.

30] Explain the concept of mobile-first design & how it relates to responsive css.

It is when we write css code for mobile devices & then use media query to add in styling for larger screen sizes. It uses media queries for min-width.

31] What is css flexbox, & what problem does it solve.

flexbox is a one-dimensional layout method for arranging items in rows or columns. It will expand to fill the additional spaces or shrink to fit into smaller spaces.

32] Explain the difference b/w flex container & flex items

flex container is the parent element & flex item is the children of the flex container.
flex container consist of flex direction, justify-content, align items & flex wrap

33] How do you create a flex container in css

To create a flex container we have to apply display: flex or inline-flex property to the element.

34] what are the main properties used to control the layout in flexbox?
flex-direction, flex-wrap, flex-flow, Justify content, align-items, align-content.

35] How do you specify the direction of flex items within a flex container.
flex-direction : column (vertically top to bottom)
—11— : column-reverse (vertically bottom-top)
—11— : row (horizontally left to right)
—11— : row-reverse (horizontall-right to left)

36] What is the purpose of the flex-grow, flex-shrink & flex-basis properties?
flex grow :- determines how much flex item can grow relative to other flex items.
flex-shrink :- specifies how much flex item will shrink if the enough space is not available.
flex-basis :- Set the initial size of flex before the free space.

37] How do you align flex items horizontally & vertically within a flex container?
By using flexdirection as column & row.

38] Explain the difference b/w Justify content & align-items properties in flexbox.
Justify content : It specifies the space b/w & around content elements [along a flex container's main axis].
align items : It sets the items on the y-axis in the flexbox.

39) How can you control the order of flex items using CSS flexbox?
By passing the number for the order.

40) What are flexbox breakpoints, and how can they be used for responsive design?
It refers to specific points or ranges of viewport width at which the layout of the web page using flexbox. They are used in responsive design to create flexible & adaptable layouts to various screen size.
To implement flexbox breakpoints first we have to determine the breakpoints. & then we have to define media queries & apply layout changes within the media query of flex container properties.

41) What are HTML attributes?
HTML attributes provide additional information about HTML elements.

42) Explain the difference b/w global attributes & element-specific attributes in HTML.
global attributes :- These are the attributes that can be used with all the HTML elements
eg:- class, id, style, title.
element-specific attributes :- These are the attributes that can be used with specific elements.
eg :- href with anchor tag, src with img tag

43) How do you add attributes to an HTML element?
we have to add attributes in the starting of the tag. eg

44) What is the purpose of the id attribute in HTML, & how is it unique?

It is used to specify a unique id for an html element. It is unique because we cannot have ~~a~~ more than one element with the same id in a html document.

45) What is the difference b/w the class attribute & the id attribute?

class attribute is used to apply for multiple elements. id attribute is unique & can apply to one element.

46) Explain the role of the href attribute in HTML, particularly in the context of links & anchors.

* href attribute specifies the link's destination.
* href in anchor tag specifies the URL (actual link).
* It indicates the relationship b/w pages & search engine.

47) How do you add alternative text to an image using the alt attribute?

In <img> tag we have two attributes src & alt. src is ~~used~~ to specify the path to the image. alt is to specify an alternate text for the image.

eg:-

48) What is the purpose of the target attribute in html links, & what are its possible values?

It indicates where to display the response ~~after~~ that is received. The possible values are - _self, _top, _parent, _new, _blank.

49] How do you use the src attribute to embed an external resource, such as an image or video in HTML?
<embed> tag used to embed an external resource. In which it contains src attribute through that we will give the image/video path (or) url.

50] What is the purpose of the disabled attribute, & how is it used in HTML form elements?
disabled attribute is a boolean attribute. it specifies that the element should be disabled. It is used inside the <input> tag. when it is used element is unusable & unclickable.

51] Is there any relation b/w Java & Javascript.
Javascript has no direct relation with Java.

52] Is Javascript a compiled or interpreted language.
Javascript is an interpreted language it doesnot requires compilation before execution.

53] Is Javascript a case-sensitive language.
Javascript is a case-sensitive.

54] What is node js
Node Js is a platform to run a Javascript file.

55] What is the difference b/w let & var.
* If we declare a variable using let then again it cannot be declared using let.
* If we declare a variable using var it can be re-initialized using var.

56) what are the differences b/w undeclared & undefined variables.

* undeclared variables are those variables which hasnot been declared using var, let or const & is being tried to access.
* undefined variable are those which are declared but not assigned any values.

57) What is Hoisting?

It is a property in JS which will move all the declaration to the top of the scope.

58) What is scope in Javascript?

Scope determines the accessibility (visibility) of the variables.

59) what are reserved words ? can I use reserved words as identifiers.

Reserved words are the normal words. but they cannot be used as a identifiers.

60) Why do you need strict mode? How do you declare strict mode.

Strict mode makes it easier to write secure Javascript. It will throw error if their is any error in the typing.

It is declared using "use strict"; to the beginning of the script or a function.

61) What are global variables.

These are variables declared outside the function to access throughout the program.

62] What are the problems with global variables.
They are easily overwritten by other scripts.

63] What is NaN property.
NaN is Not-a-Number but its property is same as the Number.

64] What is the purpose of delete operator.
delete operator is used to remove the property from a object.

65] What is the difference b/w null & undefined.
* null is primitive type which means empty value in JS.
* undefined means the variable is declared but value is not assigned.

66] What are the bitwise operators available in Javascript
AND, OR, NOT, XOR....

67] Can I redeclare let & const variables.
No, they cannot be redeclared.

68] Does const variable makes the value immutable.
Yes, By declaring variables constant creates an immutable reference.

69] What is ES6? List down some of the features of ES6.
ES6 stands for ECMAScript 6 which is the new version of Javascript introduced in 2015.
Arrow functions, let keyword, const keyword, classes, Map, Set, some String methods like .starts with(), endswith() & Array methods like find(), findIndex().

70] What are the possible ways to create objects in JS.
* In JavaScript everything is an object.
* If we define the datatype like boolean, number & Strings using new keyword the object is created.
* functions are objects by creating a function object is created.
* By creating array we can create an object.

71] What is the difference b/w slice & splice.
* Splice is used to add or remove the elements from the array. By using this original array is modified.
* slice is used to create a new array. It doesnot modify the original array.

72] what is the difference between
a) == and === operators
== checks the values but === check both values & datatypes are same.
b) = and ==
= is used to asign the value & == used to compare the values.
c) %= & =
%= is an assignment operator. & = is a comparison operator.

73] What is higher order function.
Those are the functions which takes another function as a parameter / which return another function.

74] What is currying function.?
It is the transformation of function with multiple arguements into a sequence of single arguement function.

75] What are arrow functions?
arrow function is a concise method of writing Javascript function in a short way.

76] What is a spread operator.
It is used to expand / spread the multiple elements into individual elements.

77] What is a rest parameter.
Rest parameter is used to call the function with any number of arguements.

78] what happens if you do not use rest parameter as a last arguement.
It will throw a Syntax Error.

79] What are regular Expression Patterns.
It is a set of strings that matches the pattern.

80] What is Regular Expression.
It is a sequence of characters that define search pattern which are mainly used for pattern matching with strings.

81] How do you search a string for a patterns.
By applying the regular expression pattern to target string using appropriate function & It will search the string which matches the pattern.

82] what is the purpose of switch case.
The purpose is to provide the efficient way to select the code blocks based on given variable. It is used as an alternative instead of using multiple if-else statements.

83] What are the conventions to be followed for the usage of switch case.

* Have to maintain consistent structure
* case for case label formatting better to use uppercase letters to distinguish b/w variables.
* Have to include default case. & break statement.

84] What are primitive data types.

They are pre-defined data types which are already in-built. They will store only similar type of data.

85] what are the different ways to access object properties.

There are two ways to access the object properties.

1] objectName.propertyName
2] objectName["propertyName"]

86] what are the function parameter rules.

* Javascript function definition do not specify datatypes for parameters
* Javascript function do not perform type checking on the passed arguements
* Javascript functions do not check the no of arguements received.

87] Different ways to create infinite loops.

while(true) will create infinite loop

without giving the condition & updation we can create infinite loop in for & do while loop.

88] What are template literals
(`)- It provide an easy way to concat variables & expression into the string.

89] What are default values in destructing assignment.
The default value can be any expression. default value is used when the property is not present (or) undefined. It is not used if the property has null value.

90] How do you swap variables in destructing assignment.
~~By using square brackets. first we have to declare the variable eg. [a,b] = [10,20] then we have to st~~
[a,b] = [b,a] is the destructuring assignment that swaps variables a & b. first on the right side of the destructuring a temporary array [b,a] is created. Then the destructuring of temporary array occurs.

91] Is that possible to use expressions in switch cases?
Yes, but it must be an Integer or character.

92] what are the difference b/w for of & for in statements.
* For of loop will loop through the elements of the sequence.
→ we can access the elements using for of loop
* For in is used to access the position of the elements.
→ we can access the index of the element.

93] what are the differences b/w arguements object & rest parameter
* By using rest parameter we can represent a number of arguments as an array. It is indicated by three dots (...)
By using three dots as the last arguement it will take the rest parameters. It is a array instance.

* Arguments object in Javascript is an object, which represents the arguments to the function executing.
It includes all the arguments passed to the function.
It is not an array.

94] What is the difference b/w spread operator & rest parameter.
* Rest parameter collect all remaining elements into an array.
* Spread operator spread the elements collected inside the array into single elements.

95] Explain all the array methods, what are the outputs & whether the method modifies the original array.
1] fill() - It is add the elements to the array.
* It will modify the original array.

2] concat()
* It is used to add the two arrays.
* It will create a new array.

3] indexOf()
* It is used to get the index of the required element
* It will not modify the original array.

4] includes()
* It is used to search the required element in the array
* It will not modify the original array.

5] isArray()
* It is used to identify whether it is an array or not.
* It will not modify the original array

6) toString()
* It will convert the array into string.
join() - is used to join the string

7) length() - It is used to get the length of array.

8) push() - It is used to add element to last.
* It will modify original array.

9) unshift() - It is used to add element to the starting.
It will modify original array.

10) splice() - It is used to add & remove the elements from the array.
* It will modify original array.

11) ~~splice()~~ pop() - It is used to remove the last element in the array. It will modify original array

12) shift() - It is used to remove the starting element.
It will modify original array.

13) slice() - It is used to create a sub array/new array. It will not modify original array.

14) reverse() - used to reverse an array. we can't reverse the array directly so first we have convert the array into string using .split('') then we have to reverse & then we have to join using join().
It will modify original array.

15] sort() - used to sort the elements in the array. elements are sorted based on ASCII values.

16] filter() - used to filter the elements in the array. original array is not modified.

17] reduce() - used to reduce the array elements into single value.

18. every() - used to check every element satisfies the condition or not. original array is not modified.

19] some() - used to check if some of the elements satisfies the condition or not. array is not modified.

20. find() - used to search the elements in the array. original array is not modified.

21] findIndex() - used to get the index of the required element. original array is not modified.