Full Stack Software Development Question Bank 2024 Odd Semester

1. What is HTML? Explain markup in HTML?
2. Give examples of markup languages?
3. Explain DOM? Why is it important to know about DOM for developing web applications?
4. Differentiate between web 1.0,2.0 and 3.0
5. What do u mean by full stacks? Explain the technologies involved in building a general full stack app.
6. Explain the different versions of HTML, CSS & JS based on advantages and disadvantages.
7. Are ECMAScript and JavaScript the same?
8. What are the different frameworks for JS available for developing backend
9. What are the different JS frameworks available for developing frontend?
10. What are the different CSS frameworks available for designing the frontend?
11. Explain Async and Await of JS with example
12. Why JS is called asynchronous programming language.
13. What is a callback function? Explain with examples.
14. What are media queries in CSS. Explain with examples to implement media queries in smartphone, laptop, tablets.
15. What is Bootstrap? and how do we use bootstrap.
16. What are tr and td in HTML tables?
17. Create an HTML table demonstrating the nested tables.
18. Write a program in JavaScript to demonstrate the use of alert and prompt.
19. Write a JS program to validate the following constraints in an input form.
    a. Password and confirm password should be same.
    b. Password should contain 8 characters
    c. Should be a combination of upper, lower, special characters and integers.
20. Can form validation be done just by using HTML if yes explain with examples.
21. Write a JS program to demonstrate the game of stone paper scissors. Within 20 lines.
22. Mention the types of selectors in CSS and differentiate between them?
23. What is body parser? How do we use body parser to get data from HTTP requests?
24. Define a responsive web side? How to check if the website is responsive in chrome.
25. State the differences between GET and POST method.
26. Explain the types of meta tags with examples.

27. Explain the use of console.log in JavaScript.
28. Differentiate between div and span.
29. Why it is recommended to use doctype HTML in the beginning of any HTML document.
30. We have heard about tr and td in HTML tables. What is the? And how is it different from tr?
31. Differentiate between ordered and unordered list? How do I change the ordering and unordering style in the list? e.g. disk to diamond or start from 3 or 4th no.
32. Differentiate between attributes and properties of HTML.
33. What is Nodemon and how do you configure it?
34. Differentiate between Nodejs and express JS.
35. Do we have import in express. Differentiate between import and require in NodeJS.
36. How do u tell the node server to run on any port that is available or to run on a specific code?
37. Differentiate between var let and const.
38. What do you mean by dependencies? which file stores the list of dependencies installed for a node.js project.
39. What do you mean by event driven programming? (e.g. JavaScript)
40. How do you declare array in JavaScript? Explain with an example.
41. Differentiate between the internet and www.
42. How to design a card using bootstrap?
43. Differentiate between == and === in JS.
44. Explain exception handling in JavaScript. Write the syntax inside the call-back function in express JS.
45. Differentiate between BOM (browser object model) and DOM.
46. How do we do type casting in JavaScript? WAP to convert integer to float.
47. How do we get system date and time in Express JS.
48. Differentiate between for each and for in.
49. Explain JSON. How important it is in web programming and APIs.
50. Differentiate between request and respond in JavaScript.
51. Write a code snippet to connect to a MongoDB database and create a new collection?
52. What are the differences between collections, database, and document in MongoDB?
53. In what cases do we use flexbox vs grid in terms of layout in web development?
54. What are the different ways of adding JS to HTML?
55. What are the different ways of adding CSS to HTML?
56. What is the use of meta tags in HTML?
57. State a method to center a div in a webpage?
58. What is the use of API keys in calling third party APIs?

59. Suppose we are designing a form with username and password, what kind of request (or method) should be used to submit the form and why?
60. Suppose we are designing a form for searching our website for products, what kind of request will be best to submit the search form?
61. Suppose Alice wants to convince her manager to use a NoSQL database for storing sensor data. What major points should she bring to convince her?
62. What kind of grid layout does bootstrap use?
63. How can you view the source code of a website?
64. Why do we need databases for a full stack application?
65. What are the few helpers available in handlebars?
66. We have a card element in a webpage which is placed in the top corner of the page by default. Given the following HTML and CSS how will you center the div?

HTML:

```
<!DOCTYPE html>
<html lang="en">
   <head>
        <meta charset="UTF-8">
        <meta http-equiv="X-UA-Compatible" content="IE=edge">
        <meta name="viewport" content="width=device-width, initial-
scale=1.0">
        <title>Document</title>
   </head>
   <body bgcolor="aliceblue">
        <div class="card">
             Card content
        </div>
   </body>
</html>
```

CSS:

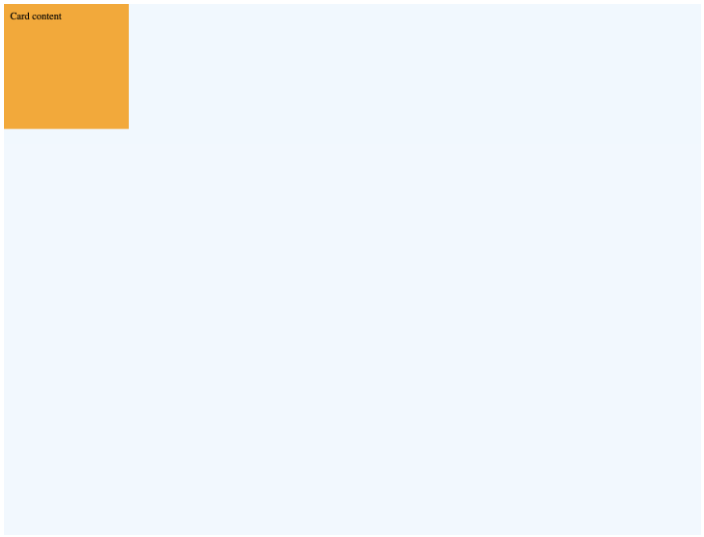
```
*{
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}

.card{
  background: orange;
```

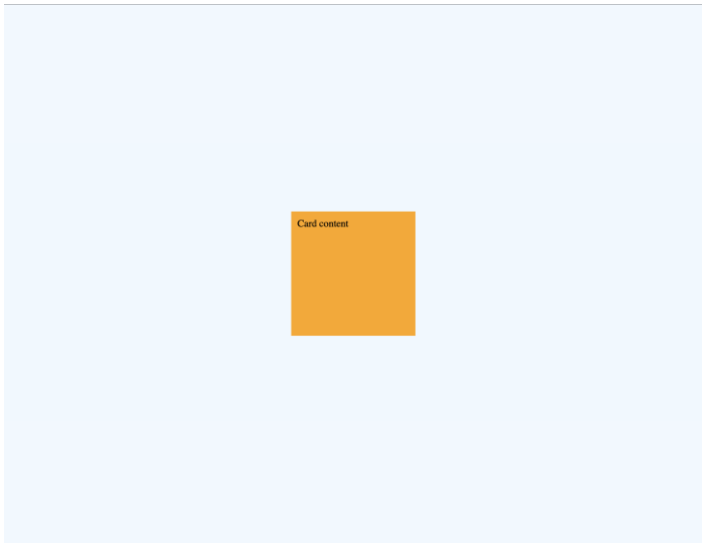
```
  width: 200px;
  height: 200px;
  padding: 10px;
}
```

Mention the CSS changes we will need to center the div?

Initial View:



Final View:



67. How many ways are there to insert CSS in your document? Explain all of them.
68. What are the key differences between flexbox and grid?

69. Why should we perform external API requests from our backend server instead of directly from the frontend?
70. When inserting HTML from JavaScript why should we use `innerText` instead of `innerHTML`?
71. What is the difference between `setTimeout` and `setInterval`?
72. Why do we need asynchronous functions?
73. How do we write an asynchronous function?
74. What are the differences between declaring a variable with `let` and `var`.
75. What are callback functions? Tell use cases where you have seen callback functions being used.

MCQs

1. What will be the result of this following JS line - `` `console.log(1 == "1")` ``

    A. True
    B. False

2. Which of the following HTML tags can be used to create a hyperlink

    A. <target></target>
    B. <html></html>
    C. <a>
    D. <link />

3. Which of the following tag can be used to show an image in HTML

    A. link
    B. Img
    C. src
    D. image

4. We want to create a multi-row image gallery, which display will be best for this case

    A. flex
    B. block
    C. inline
    D. grid

5. We can set gradient background using CSS?

    A. No
    B. Yes

6. What is the function of JavaScript in web development

A. Interactivity
B. Declaring the layout
C. Stylizing the layout
D. Paint Pictures

7. What kind of API request we can use for updating user password

A. GET
B. PATCH
C. POST
D. DELETE

8.Which of this is not an array related function

A. map
B. size
C. reduce
D. sort

9.For responsive design what is the most important line?

A. position: relative;
B. width: 500px;
C. @media (max-width: <insert value here>){}
D. display: none;

10.What will be the result of this following JS line - `console.log(1 === "1")`

A. False
B. true

11.Which language can be used to create a backend

A. All of the mentioned
B. JavaScript
C. Go
D. Python

12.We have two kinds of list in HTML - True or False?

A. True
B. False

13.Which of the following CSS property can be used to change the background colour of an HTML element?

A. color
B. bg
C. fill
D. background-color

14.What do we use fetch() api in JS for

A. To render HTML
B. To do API calls to servers
C. To listen to DOM events
D. To create illusions

15.Which is a valid way to loop through arrays on JS

A. array.loop()
B. array.forEach()
C. array.for()
D. array.while()

16.Let's say we have a file called "main.js". How can we link it to HTML?

A. <script name="main.js">
B. <script href="main.js">
C. <script src="main.js">
D. None of the above

17.Suppose we have a component with a specific ID, what is the function we are using to reference that component in JS

A. document.getElementsByClassName()
B. document.getElementsById()
C. document.getElementById()
D. document.getElementByClassName()

18.What is NPM?

A. A package manager for node.js
B. A javascript runtime for bare metal / windows systems
C. A server based on node.js
D. A javascript runtime for browsers

19.Suppose we are programming an API, what kind of request should we use to serve the data from server to client upon request

A. PUT
B. DELETE
C. POST
D. GET

20.Which of the following selector can be used for selecting an HTML element with the class of "hello" in CSS

A. hello
B. :hello
C. #hello
D. .hello

21.The "click" event triggers on a HTML element when?

A. The mouse leaves the element
B. The element is clicked
C. The mouse enters the element
D. The element is dragged

22.Which of the following can be used to get all the elements with the same class name in JS

A. document.getElementById
B. document.getElementsByClassName
C. All of the above
D. None of the above

23.What is node.js

A. A javascript runtime for the browser
B. A Javascript runtime for system/bare metal
C. A compiler for Javascript
D. A Web Browser