WAD ALL QUESTIONS

Question for apply template:

Create an XML file that stores student details (Name, Roll Number, Course, Marks).

Write an XSLT stylesheet that converts the XML data into an HTML table.

Use <xsl:apply-templates> to format each student entry.

Handwritten Assignment to be submitted by 12th November. Questions are :

Q1. What is CMS.

Q2. What are the features of CMS?

Q3. Explain DRUPAL and WordPress in detail.

Q1 Write a JavaScript function that selects all <p> elements in a document and logs them to the console.

Select an element with a specific id and change its text content using JavaScript.

Write a function to remove an element with a given class name from the DOM.

Create a simple HTML table with 3 rows and 3 columns. Write a JavaScript function that changes the content of a specific cell when a button is clicked.

Assignment notebook

Write a function that changes the src of an image when a button is clicked.

Write a JavaScript function that displays the current date and time in a <div> when a button is clicked.

Form Validation Questions:

Q1. Create a simple form with an input field. When the form is submitted, check if the input field is empty. If it is, display an error message next to the field.

Q2. Create a form with "Name", "Email", and "Phone Number" input fields. Write JavaScript to validate that all fields are filled correctly (Name is not empty, Email is valid along with placeholder, and Phone Number is 10 digits long). Display appropriate error messages for each field.

Practice Questions for javascript.

What is JavaScript? How is it different from Java?

What are the different data types supported in JavaScript?

Explain the difference between var, let, and const in JavaScript.

What is hoisting in JavaScript? How does it affect variable declarations?

What are JavaScript closures? Provide an example.

What is the Document Object Model (DOM)?

How can you manipulate HTML elements using JavaScript?

Explain event bubbling and event capturing.

What is the difference between addEventListener and inline event handlers?

How can you prevent the default behavior of an event?

What is the difference between function declarations and function expressions?

Explain the concept of "this" in JavaScript.

How do prototypes work in JavaScript? What is their significance?

Explain the difference between synchronous and asynchronous code execution.

What is the purpose of promises in JavaScript? How do they improve asynchronous programming?

What is the difference between call(), apply(), and bind() methods?

What is the difference between == and === in JavaScript?

Explain the concept of modules in JavaScript.

Practical Questions

Write a JavaScript program to reverse a string.

Write a function to check whether a given number is prime or not.

Create a simple HTML page and use JavaScript to:

Change the background color of the page when a button is clicked.

Display the current date and time in a specified format.

Write a program to fetch data from a public API using fetch and display it on a web page.

Develop a simple to-do list using JavaScript that allows:

Adding new tasks.

Marking tasks as complete.

Deleting tasks.

Create a function that accepts an array of numbers and returns the largest number.

Write a program to sort an array of objects by a property value (e.g., name or age).

Write a JavaScript function to validate a form with fields for email, password, and username. Ensure:

The email has a valid format.

The password has at least 8 characters, including one uppercase letter and a number.

The username is not empty.

Create a simple calculator using JavaScript that can perform addition, subtraction, multiplication, and division.

Write a script to toggle a CSS class for an element when it is clicked.

What is AJAX, and what does it stand for?

How does AJAX work in web development?

Explain the difference between synchronous and asynchronous requests in AJAX.

What are the advantages of using AJAX in web applications?

Mention some limitations or drawbacks of AJAX.

What is the role of the XMLHttpRequest object in AJAX?

Explain the different readyState values of the XMLHttpRequest object.

What are the HTTP methods commonly used in AJAX requests? Explain their differences.

What is JSON, and why is it commonly used with AJAX?

What is the significance of the onreadystatechange event in AJAX?

Explain the difference between GET and POST methods in AJAX.

How can you handle errors in AJAX requests?

What is the purpose of HTTP status codes? Mention some common status codes used in AJAX.

How can you prevent cross-origin request errors in AJAX?

Practical:

Write a simple AJAX script to fetch data from a server and display it on a web page.

Create an AJAX request to fetch JSON data from a server. Parse and display the data dynamically on a webpage.

Develop an AJAX-based search bar that fetches and displays suggestions as the user types.

Write a program to submit a form using AJAX and display a success or error message without reloading the page

1.Discuss how operators in JavaScript enhance array manipulation.

2.What is AJAX, and how does it enable asynchronous communication between a client and a server?

3.Write an example code using JavaScript and AJAX to fetch data from a server (e.g., a list of users) and display it dynamically on a webpage without refreshing it.

4.WAP to Compute the average, and min value

5. Explain the advantages and disadvantages of using AJAX in web applications.

6.WAP to Sort the array in ascending order.

7. What is a CMS (Content Management System), and what are its key benefits? 8. Compare and contrast WordPress and Drupal in terms of: Ease of use, Customization options, Scalability for large projects. 9.Provide examples of use cases where each CMS would be more suitable.

10. What are the differences between absolute, relative, and fixed positioning in CSS? Provide practical use cases for each.

11. Write a program to declare an array of numbers

 12. What are DTD (Document Type Definition) and XML Schema, and how do they ensure XML data validity?

13. Describe the role of HTML forms in user interaction and data collection. Design a form with the following fields:

Name (text input)

Email (real-time validation using JavaScript to check format as the user types)

Gender (radio buttons)

Hobbies (checkboxes)

Preferred Language (dropdown)

Feedback (textarea with live word count display)

Write JavaScript code to provide instant feedback to users, highlighting errors before form submission.

14.What is the DOM (Document Object Model), and how can JavaScript dynamically interact with it to modify HTML elements?

15. What is AJAX, and how does it enable asynchronous communication between a client and server?

16. Write a JavaScript example to fetch and display server data (e.g., a user list) without refreshing the page.

17. List two benefits and two drawbacks of using AJAX for web applications.

18. What is an XML Schema, and how is it different from a DTD? Provide an XML Schema example for validating customer information.

19. Discuss the role of arrays in JavaScript for managing data collections. Explain how operators help in array manipulation.

20. Define a JavaScript object and create an example of an object called car with make, model, and year properties. Show how to access these properties.

21. Explain inline, internal, and external CSS. Provide examples where each is best suited. Write an HTML page with:

A button with hover effects to change background color and text size.

22. What are PWAs, and how do they improve user experience? Discuss features like offline access and push notifications.

23. What is SEO, and how can web developers enhance a website's search engine ranking?

24. Compare GraphQL and REST APIs. Provide examples of fetching data using GraphQL.

25. What are the steps for connecting PHP to a MySQL database? Write a PHP script to:

  - Connect to MySQL

  - Create a database (Teacher)

  - Create a table (Teacher) with columns Tid, TName, Subject , 'DOJ'

  26. Explain the significance of error handling in PHP-MySQL operations.

27. Create a table to display product information, including name, price, availability, and description. Use alternating row colors, header background color, and tooltips for the description column. Explain how CSS enhances table design and usability. 28. Explain the distinction between GET and POST methods in HTML forms. What scenarios are best suited for each?

29. What is a CMS, and what are its key benefits? Compare WordPress and Drupal based on:

30. How can developers ensure cross-browser compatibility? List tools and best practices.

31. Explain techniques for optimizing website performance. Discuss lazy loading, minification, and caching.

32. What are SPAs, and how do they differ from traditional web applications? Provide examples of frameworks used to build SPAs.

33. What is the difference between server-side and client-side scripting? Provide examples to illustrate.

34. What are prepared statements in PHP, and why are they important? Write a script to safely insert form data into a MySQL database.

35. Write PHP scripts for creating, reading, updating, and deleting records in a MySQL database.

36. Explain how PHP sessions work for managing user authentication. Write an example script for user login/logout functionality.

37. How can you read, write, and delete files in PHP? Write a script to log user activity into a text file.

38. What are XML namespaces, and why are they important? Provide examples.

39. Explain how <audio> and <video> tags are used in HTML to embed media. Provide examples of custom controls using JavaScript.

40. What is responsive design, and how does it improve user experience? Explain the role of media queries in CSS.

41. Compare CSS Grid and Flexbox for layout design. Provide examples where each is best suited.

42. What are pseudo-classes in CSS? Demonstrate their use with examples for hover effects and form input validation.

43.What are the differences between function declarations, expressions, and arrow functions? Provide examples.

44.How does event delegation work in JavaScript? Write a program to demonstrate event handling for dynamically added elements.

45.Compare promises and async/await in JavaScript. Write a simple example using each approach to fetch data from an API.

46.What is version control, and how does it aid web development? Compare Git and SVN for version control.

47.What are the different types of testing in web development? Explain unit testing with an example using Jest or Mocha.

48.Explain the differences between arrays and objects in JavaScript. Provide examples where each is more effective.

49.How does error handling work in JavaScript? Provide examples of using try, catch, and finally blocks for handling runtime errors.

50. What is the difference between localStorage and sessionStorage in HTML5? Provide use cases and examples.

51.Compare cookies and sessions for maintaining user state. Explain how they are implemented in web applications.

52.What are Web APIs, and how are they used in modern web development? Provide an example of integrating the Geolocation API in a webpage.

53. What is REST? Explain the principles of RESTful APIs and how HTTP methods like GET, POST, PUT, and DELETE are used.

54.Write an AJAX-based JavaScript program to dynamically load comments from a server when a user scrolls to the bottom of a webpage.

55.Compare JSON and XML as data formats. Provide examples of parsing and manipulating both formats using JavaScript.

56.Explain WebSockets and their advantages for real-time communication. Provide an example of implementing WebSocket communication in a chat application.

57.Explain XPath and its role in navigating XML documents. Write examples of selecting elements using XPath expressions.

58.What is a JSON Schema, and how does it validate JSON data? Write an example schema to validate a collection of books (title, author, year).

59. What is XSLT, and how is it used to transform XML data? Provide an example to convert XML into an HTML table.