

|  |  |  |  |
| --- | --- | --- | --- |
| **DEPARTMENT** | **:** | **INFORMATION TECHNOLOGY** |  |
| **COURSE CODE** | **:** | **22IT401** |  |
| **COURSE NAME** | **:** | **WEB TECHNOLOGY** |  |

**QUESTION BANK**

**2 MARKS**

|  |  |
| --- | --- |
|  | Differentiate between inline, embedded, and external CSS. |
|  | Describe the role of cookies in session management. |
|  | Define URL with an example? |
|  | What is the purpose of the <table> element in HTML5? |
|  | Write down the structure of the HTTP request? |
|  | What is the significance of the Servlet Life Cycle? |
|  | What is event bubbling? |
|  | Define the term "HTTP Request Message." |
|  | Distinguish between client-side scripting and server-side scripting? |
|  | Explain the purpose of JavaScript exception handling. |
|  | Explain the purpose of the doGet() and doPost() methods in Servlets. |
|  | Write a simple PHP code snippet to declare and print a variable. |
|  | Write a basic Docker command to create a container for a Node.js application. |
|  | Create a simple AngularJS form with validation that checks whether a field is required. |
|  | Define the Document Object Model (DOM) in JavaScript. |
|  | List the advantages of servlet over CGI? |
|  | What is JSON in JavaScript? |
|  | Differentiate between inline and external JavaScript. |
|  | Design an XML document defining a simple book structure with elements such as title, author, and price. |
|  | Distinguish between stateful and stateless protocols? |
|  | Outline the steps involved in establishing database connectivity using JDBC in a servlet. |
|  | How will you create variables in PHP? |
|  | Write an example of AngularJS two-way data binding using expressions. |
|  | What is docker? |
|  | Write an example of using the ng-repeat directive to display a list of items in AngularJS. |
|  | What are the two sets of regular expressions offered by PHP? |
|  | Explain the role of a web client in the client-server model. |
|  | Write an example of form validation in PHP that checks if an email field is filled. |
|  | What is MVC? |
|  | Create a basic XML Schema that defines the structure of a product catalog, including product name, category, and price. |

**13 MARKS**

|  |  |
| --- | --- |
|  | Develop a PHP program that processes a user registration form. The form should include fields for username, password, and email. Implement server-side validation to check if all fields are filled and if the email address is in a valid format. Display appropriate error messages for invalid inputs. |
|  | Develop an XML document defining a book catalog, including elements for the book title, author, price, and publication year. Create an accompanying XML Schema to validate the structure of this document. Additionally, write an XSL file to display the book catalog in an HTML table format. |
|  | Discuss how to create list’s and frame’s using HTML with an Example |
|  | Analyze the role of CSS3 transformations and transitions in enhancing user experience on a webpage. Discuss with examples. |
|  | Develop a web page using HTML5 and CSS3, including a table, image, and background color. Ensure the page uses both inline and external CSS for styling. |
|  | Design a fully responsive web page using HTML5, CSS3, and Bootstrap, incorporating features like video controls, drag-and-drop elements, and shadow effects. Present the code and explain the design choices. |
|  | Explain in detail about how CSS3 and its advantages and its types – Inline, embedded and external style sheets |
|  | Develop a JavaScript program to create a dynamic HTML (DHTML) page that changes the background color of a webpage when a button is clicked. Include event handling to allow the user to choose the color from a drop-down list and validate that a color is selected before changing the background. |
|  | Create a dynamic web page using a JavaScript with dynamic html tags with an example? |
|  | Evaluate the advantages and limitations of using Bootstrap as a framework for responsive web design compared to traditional CSS. |
|  | Develop a JavaScript program that fetches data from a JSON file containing user details (name, age, and email). Use JavaScript DOM manipulation to display this data in an HTML table. Include exception handling to manage potential errors such as file not found or malformed JSON. |
|  | Discuss about JSON data, values, objects, arrays and accessing JSON data? |
|  | Analyze the role of built-in objects such as Date, Math, and String in simplifying JavaScript programming. Provide examples to support your analysis. |
|  | Write a JavaScript code to validate a user registration form that checks if the email and password fields are filled correctly. Include event handling for the "Submit" button. |
|  | Explain in detail about the servlet lifecycle and write a program to demonstrate servlet lifecycle? |
|  | Evaluate the advantages and limitations of using JSON over XML for data interchange in web applications. Provide relevant examples to support your arguments. |
|  | Design a dynamic HTML (DHTML) page using JavaScript to display a list of items that the user can sort and filter. Implement the sorting and filtering functionalities using JavaScript DOM manipulation. |
|  | Evaluate the advantages and challenges of using JDBC for database connectivity in servlets compared to other database access methods such as JPA or Hibernate. |
|  | Explain in detail with an example program how get and post methods work in a HTML form? |
|  | Evaluate the benefits and challenges of using Firebase as a backend for real-time web applications compared to traditional relational databases. Discuss its scalability and ease of integration. |
|  | Explain with an example how to connect a PHP program with the database? |
|  | Write a Java servlet program that handles form data using GET and POST methods. Illustrate the differences in how data is sent and retrieved in both cases. |
|  | Design a servlet-based web application that manages user sessions and stores user preferences using cookies and session tracking. Include features like login, logout, and preference retrieval from the database using JDBC. |
|  | Analyze the different approaches to session management in servlets, including URL rewriting, hidden form fields, and cookies. Discuss the strengths and limitations of each method. |
|  | Explain in detail about the XML document, features of XML and its DTD? |
|  | Evaluate the advantages and limitations of using XML Schema versus Document Type Definition (DTD) to define the structure of XML documents. Provide relevant examples to support your evaluation. |
|  | Explain in detail the various conditional and style directives in Angular JS? |
|  | Analyze how built-in PHP functions simplify form validation and discuss the importance of using server-side validation alongside client-side validation. |
|  | Develop an XML document and its corresponding XSL file to display the content of the XML file in a web browser with custom formatting. Explain the steps involved in the XML transformation process using XSLT. |
|  | Explain the Django web application framework is a popular choice for building a wide range of web applications in detail? |
|  | Design a PHP-based web application that takes user input through a form, validates the data (including email, age, and phone number), and stores the information in an XML file. Ensure the form includes error handling for invalid inputs. |
|  | Write an XML program for student details with name, branch, register number, subjects and marks and Check the Well Formedness of XML document using DOM API. |
|  | Compare the use of services and controllers in AngularJS for managing application logic and state. Analyze the roles each plays in maintaining the separation of concerns in large applications. |
|  | Create a webserver-based chat application using PHP. The application should provide the function  functions.   * Login * Send message (to one or more contacts) * Receive messages (from one or more contacts)   Add/delete /modify contact list of the user |
|  | Evaluate the strengths and weaknesses of using Docker for deploying web applications compared to traditional virtual machine-based deployments. Discuss aspects like performance, isolation, and scalability. |
|  | Analyze how AngularJS’s MVC architecture separates concerns between the Model, View, and Controller. Provide examples of how this separation benefits application development. |