Final Assessment Test (FAT) - May 2024

Programme	B.Tech.	Semester	WINTER SEMESTER 2023 - 24
Course Title	INTERNET AND WEB PROGRAMMING	Course Code	BCSE404L
		Slot	D1+TD1
Faculty Name	Prof. Saravanan P	Class Nbr	CH2023240501779
Time	3 Hours	Max. Marks	100

General Instructions:

• Write only Register Number in the Question Paper where space is provided (right-side at the top) & do not write any other details.

Answer all questions (10 X 10 Marks = 100 Marks)

01. i). Mampi is planning to open a company that deals with rural handicrafts. She wants to advertise about handicrafts on a social platform. Which Internet service she should use and why? Explain it briefly. **(5 marks)** **[10]**

ii). Sahil, a Class X student, has just started understanding the basics of Internet and Web Technologies. He is a bit confused in between the terms "World Wide Web" and "Internet". Help him in understanding both the terms with the help of suitable examples of each. **(5 marks)**

02. A web development firm is creating a webpage to showcase a online restaurant menu. The menu is organized into categories, each displayed as a div labeled "menu-type." Under each category, there are several menu items, each presented as a div labeled "menu-item." The primary objective of the web developer is to design an engaging and interactive menu interface. **[10]**

i). Construct the HTML layout for three distinct menu categories, each encompassing a minimum of three menu items. Incorporate basic information for each menu item, such as name, description, and price. **(5 Marks)**

ii). CSS Styling and Transition Effects **(5 marks)**:

• Apply distinctive background colors to all elements identified by the class "menu-type" to enhance their visual differentiation.

• Enhance the appearance of menu items by adding borders, a subtle box-shadow effect, and rounded corners.

• Incorporate a seamless transition effect on menu items, ensuring that the border color changes gradually and smoothly upon hovering over them.

03. Develop a simple todo list web application using HTML, CSS, and JavaScript. The application should allow users to manage their tasks efficiently. Below are the specific requirements for the todo list application: **[10]**

i). Write an HTML program to get the task items which includes 'Task name' and 'Due date' using Text input fields. Provide an add button "Add Task" and implement a Javascript method to add the details in the list control. Every task item should be displayed with two additional

buttons called "Task Completed" with initially "red" in color and "Remove Task". Add necessary CSS code for the properties. **(5 Marks)**

ii). If the "Task Completed" button is clicked it should change the color from "red" to "green". Add necessary Javascript function to change the color. **(2 Marks)**

iii). Once the task is completed the user may remove the task item from the list by clicking "Remove Task" button. Add an eventlistener on this button to remove the task item from the list and display the updated list. **(3 Marks)**

04. Develop a webpage for an online Pizza delivery system using HTML and DOM. **[10]**

i). The webpage must contain a text box to get the names of the customers one by one. When "add" button is clicked add the names as a text to an empty ordered list item using DOM. (Add 3 items) **(4 marks)**

ii). Display an initial status message "Your order is pending" inside a <p> tag. Populate the two buttons: "Start Preparation" and "Deliver Pizza" when the order is received. When the "Start Preparation" button is clicked, change the status message to "Pizza is being prepared". When the "Deliver Pizza" button is clicked, change the status message to "Pizza is out for delivery". **(4 marks)**

iii). Assume there is a <h1> tag that displays the Pizzeria name. Display the node name, type and value of its parent node. (Assume <h1> tag is the first child of <body> tag). **(2 marks)**

05. Design simple prototype for an online banking system using HTML/PHP sessions and cookies. **[10]**

i). Enter and validate the credentials from home page. If the credentials are correct then navigate to options page and create a session. If not redirect to home page with respective "invalid credential message". The options page displays a hyperlink "NEFT" and the session id. The hyperlink will navigate to payment page. **(5 marks)**

ii) In the payment page fetch the debit amount and display the balance with session id if balance is available else display "Invalid Transaction". Assume that the customer has a balance of Rs.300000/-. **(3 marks)**

iii). When the logout hyperlink is clicked in payment page destroy the session and redirect to homepage. **(2 marks)**

06. You are developing an inventory management system for an online store. Your task is to create **[10]** PHP functions to handle inventory-related operations such as adding products and updating quantities. Get the input values for both functions using Form. Design an online inventory management system using HTML/PHP.

i). Develop a PHP function named **Add_Prdt** that allows administrators to add new products to the inventory. The function should take parameters such as product name, price, quantity, and category. Implement validation checks to ensure that the price and quantity are valid numeric values. **(5 Marks)**

ii). Create a PHP function named **Update_Qty** for updating the quantity of a specific product in the inventory. The function should take parameters such as product ID and new quantity. Ensure that the product ID is valid and exists in the inventory before updating the quantity. **(5 Marks)**

07. Develop an online polling system for a website. The system allows users to vote on Elective **[10]** courses for the seventh semester of the curriculum and view real-time results without refreshing the page. You decide to implement the system using PHP for server-side processing and AJAX. Assume that there are three courses : Machine Learning, Data Science and Web Development, and initial polling count is 0 for every course

i). Implement the Server-side scripting for the following requirements. **(5 Marks)**

- To handle voting functionality, including adding votes to the database and retrieving poll results.
- To prevent duplicate votes and ensure data integrity.

ii). Implement the Client-side scripting for the following requirements. **(5 Marks)**
- Develop JavaScript code to send asynchronous requests to the server for voting and retrieving poll results.
- Implement event handlers to capture user interactions, such as clicking on vote buttons or selecting poll options.
- Update the UI dynamically to reflect voting results without reloading the page, providing a seamless user experience

08. Consider the following entities and their relationships : **[10]**

i). Emp (emp_no, emp_name, address, dept_no, phone, salary)

ii) Dept (dept_no, dept_name, location)

With this schema, create "Emp" and "Dept" tables using MySQL. Both the tables are related with a one-to-many relationship, where each employee belongs to one department, but a department can have multiple employees. **(6 Marks)**

Using above database write a HTML/PHP script which will print a salary analysis statement in the format given below, for a given department. (Accept department name from the user). **(4 Marks)**

Deparment Name : _____

Maximum Salary, Minimum Salary, Sum Salary

09. Imagine you're developing an online bookstore system that manages books, authors, genres, and customer orders. The system needs to store information about books, including titles, authors, genres, publication dates, prices, and availability. It also needs to track customer orders, including order IDs, customer details, ordered books, quantities, and total prices. **[10]**

i). Design a DTD that defines the elements and attributes needed to represent bookstore information which include the following details. **(5 marks)**
- bookstore – has any number of book and order
- book – has title(string), authors(string, multiple authors may be there), publishing year, price, availability(int, number books available)
- order- has order_id, customer, items, total_price
- customer-has name, email, address

Enforce constraints to ensure data integrity, such as the uniqueness of book titles and author names, the presence of required elements for customer orders, and relationships between elements (e.g., each book must have at least one author)

ii) Provide an example XML document that conforms to the DTD, demonstrating the structure and content of the online bookstore system. **(5 marks)**

10. Design an online Student Mark Management System using Node.js and MongoDB. Perform the following: **[10]**

i). Create a collection called student. Insert two documents in the collection (register_no, name and mark). **(4 marks)**

ii). Display the name of the student who scored 100 and update the mark of the student with register_no "101" from 77 to 78. **(4 marks)**

iii). Delete the second document. **(2 marks)**

⇔⇔⇔