**Unique Paper Code: 32343306**

**Name of the Course: B.Sc. (H) Computer Science**

**Name of the Paper: Web Design and Development - SEC**

**Semester: III**

**Year of Admission: 2019 onwards**

**Duration: 3 Hours**                                        **Maximum Marks: 75**

**Instructions for Candidates:**
**Attempt any four questions.**
**All questions carry equal marks.**

1.  Using examples, briefly explain the different methods of creating style sheets. Also, discuss the order of precedence in which these are applied.

    Assuming there is a picture file "mountains.jpg" saved at the location "C:\student\wdd1\mountains.jpg" in the file system. Consider the two HTML statements for including this picture file in a web page given below.
    <img src="mountains.jpg" alt="mountain picture"/>
    <img src="C:\student\wdd1\mountains.jpg" alt="mountains photo"/>
    What is the difference between these two statements? Which one of the two statements is a better way of including images in a web page?

    Using HTML, design a picture gallery showing 9 pictures in a 3x3 grid along with the title of the picture under the image. Using external stylesheet apply the following styles:
    -   The background colour of the page should be "yellow".
    -   All images should have a thick black border.
    -   Every odd row of the grid should have light blue background colour.
    -   The title of the picture should be centre-aligned and blue in colour.

2.  Write the JavaScript statements to display the number of web pages visited by the user, name and version of the browser used, preferred language of the user and number of plugins available.

Create HTML page displaying the text and apply action for buttons for formatting as shown below:

```
Hello World 1
Hello World 2
Hello World 3
Hello World 4
Hello World 5
```

Formatting Options:

| Bold | Underline | Blue Color | Courier New Font |

The "Hello World #" text should be dynamically generated using JavaScript when the page loads and is surrounded by a border. Appropriate formatting should be applied to the text as per the button clicked.

3. Design a webpage using HTML for booking a room in a hotel. The form should accept the following data from user:

- Name of the person
- No. of guests going to stay
- Type of room (Non AC, AC and Suite)
- Start Date
- End Date

Using JavaScript, perform the following validations:

- Name of the person cannot be blank.
- No. of guests should be numeric and greater than 0.
- Type of room must be selected.
- Start Date should be greater than equal to today's date.
- End Date should be greater than start date.

A warning message should be displayed in case any of the mentioned validation fails. The form should have "Submit" and "Reset" buttons.

4. Explain three types of Dialog boxes in JavaScript. Is JavaScript string using double quotes is exactly the same as a string using single quotes? Explain.

Explain the role of cookies in web design and development? Give the syntax to create and read a cookie in JavaScript.

Write a JavaScript code to generate electricity bill by entering number of readings by the user and calculate the bill according to the following conditions:

- For first 50 units – Rs. 3.00/unit

- For next 100 units – Rs. 4.00/unit

- For next 100 units – Rs. 6.00/unit

- For units above 250 – Rs. 7.00/unit

Customer enters the number of units and gets bill amount.

5.     What are super-global variables in PHP? Give some examples. Briefly explain different ways of creating arrays in PHP with appropriate examples.

Using PHP, define an array of 3 products with product code as key and an array of product name, price and quantity as its value. Define the functions to do the following:

- Search a product for a given product code.
- Display all the product information, in an ordered list.
- Calculate the total bill amount.

6.     Create an employee registration form with following input fields:

- Employee ID
- Name
- Department
- Email Address
- Designation

Use a drop down for the *Department* field with values "*Sales*", "*HR*" and "*Engineering*". The form should be submitted to a file named *process.php*. The file *process.php* should first validate the data entered and check for empty fields entered by the user. If all the input fields are successfully validated employee data should be saved in a MySQL table, otherwise display appropriate warning message.

Also, create a PHP page *allemps.php* for displaying all employee data sorted by their names in a tabular format.