CSS PRACTICAL LIST

Q. 1 (a) Write simple JavaScript with HTML for arithmetic expression evaluation.

a.

```
<!DOCTYPE html>

<html lang="en">
<head>

    <title>Arithmetic Operations</title>
</head>
<body>
    <h1>Arithmetic Operations Example</h1>

    <script>
        // Hardcoded values for operations
        var num1 = 10;
        var num2 = 5;

        // Addition
        var addResult = num1 + num2;
        document.write("Addition (10 + 5): " + addResult + "<br>");

        // Subtraction
        var subResult = num1 - num2;
        document.write("Subtraction (10 - 5): " + subResult + "<br>");

        // Multiplication
        var mulResult = num1 * num2;
        document.write("Multiplication (10 * 5): " + mulResult + "<br>");

        // Division
        var divResult = num1 / num2;
        document.write("Division (10 / 5): " + divResult + "<br>");

        // Modulus
        var modResult = num1 % num2;
        document.write("Modulus (10 % 5): " + modResult + "<br>");
    </script>
</body>
</html>
```

OR

(b) Write a JavaScript to create pull-down menu with four options[AICTE,MSBTE,GOOGLE] Once the user will select one of the then user will be redirected to that site.

b.

```
<html>
<head>
<title>HTML Form</title>
<script language="javascript" type="text/javascript">
function getPage(choice)
{
page=choice.options[choice.selectedIndex].value;
if(page != "")
{
window.location=page;
}
}
</script>
</head>
<body>
<form name="myform" action="" method="post">
Select Your Favourite Website:
<select name="MenuChoice" onchange="getPage(this)">
<option
value="https://www.google.com">Google</option>
<option
value="https://www.msbte.org.in">MSBTE</option>
<option
value="https://www.yahoo.com">Yahoo</option>
</form>
</body>
</html>
```

Q.2. (a) Write a JavaScript code to illustrate comparision operator.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Comparison Operators Example</title>
</head>
<body>
```

```
    <h1>Comparison Operators in JavaScript</h1>

    <script>
        // Define some example variables
        var a = 10;
        var b = 5;
        var c = "10";
        var d = true;

        // Using comparison operators
        document.write("a = " + a + ", b = " + b + ", c = " + c + ", d = " + d +
"<br><br>");

        // Equal to (==)
        document.write("a == b: " + (a == b) + "<br>"); // False: 10 is not equal
to 5
        document.write("a == c: " + (a == c) + "<br>"); // True: 10 == '10'
(loose equality checks value)

        // Strict equal to (===)
        document.write("a === b: " + (a === b) + "<br>"); // False: 10 is not
strictly equal to 5
        document.write("a === c: " + (a === c) + "<br>"); // False: 10 is not
strictly equal to '10' (different types)

        // Not equal to (!=)
        document.write("a != b: " + (a != b) + "<br>"); // True: 10 is not equal
to 5
        document.write("a != c: " + (a != c) + "<br>"); // False: 10 == '10'
(loose inequality checks value)

        // Strict not equal to (!==)
        document.write("a !== b: " + (a !== b) + "<br>"); // True: 10 is not
strictly equal to 5
        document.write("a !== c: " + (a !== c) + "<br>"); // True: 10 is not
strictly equal to '10' (different types)

        // Greater than (>)
        document.write("a > b: " + (a > b) + "<br>"); // True: 10 is greater than
5

        // Less than (<)
        document.write("a < b: " + (a < b) + "<br>"); // False: 10 is not less
than 5
```

```
        // Greater than or equal to (>=)
        document.write("a >= b: " + (a >= b) + "<br>"); // True: 10 is greater
than or equal to 5

        // Less than or equal to (<=)
        document.write("a <= b: " + (a <= b) + "<br>"); // False: 10 is not less
than or equal to 5

        // Logical comparisons with booleans
        document.write("d == true: " + (d == true) + "<br>"); // True: d is true
        document.write("d === true: " + (d === true) + "<br>"); // True: d is
strictly true
    </script>

</body>
</html>
```

OR

(b) Create a webpage with Text and image rollovers effects.

a.

b.

```
     <html>

<head>
<title>
rollovers</title>
</head>
<body>
<table border="1" width="100%">
<tbody>
<tr valign="top">
<td width="50%">
<a><img height="500" src="motivation.png" width="900"
name="clr"></a></td>
<td><a onmouseover="document.clr.src='blue.png' ">
<b><u>Motivational book</u></b></a>
<br>
```

```
<a onmouseover="document.clr.src=education.png" ">
<b><u>Educational book</u></b></a>
<br>
</td>
</tr>
</tbody>
</table>
</body>
</html>
```

Q. 3 (a) Write a Code to illustrate use of Switch case in JavaScript.

a.

```
<!DOCTYPE html>
<html lang="en">
<head>

    <title>Switch Case Example</title>
</head>
<body>
    <h1>Switch Case in JavaScript</h1>

    <script>
        // Example: Day of the week using switch case
        var n = prompt("Enter any Number from 1 to 7:");  // You can change the
value to test different days (1-7)
        var day = parseInt(n);

        switch (day) {
            case 1:
                document.write("Today is Monday.<br>");
                break;
            case 2:
                document.write("Today is Tuesday.<br>");
                break;
            case 3:
                document.write("Today is Wednesday.<br>");
                break;
            case 4:
                document.write("Today is Thursday.<br>");
                break;
            case 5:
                document.write("Today is Friday.<br>");
```

```
                break;
            case 6:
                document.write("Today is Saturday.<br>");
                break;
            case 7:
                document.write("Today is Sunday.<br>");
                break;
            default:
                document.write("Invalid day.<br>");
        }
    </script>

</body>
</html>
```

OR

(b) Write a HTML Script that will display list containing options such as Red, Green, Blue and yellow. Write a JavaScript program such that when the user selects any option . It will change the background color of webpages

b.

```
<html>
<body>
<label for="color">Choose a Background Color:</label>
<select name="color" id="color" class="color" onchange="changeColor()">
<option value="red">Red</option>
<option value="green">Green</option>
<option value="blue">Blue</option>
<option value="yellow">Yellow</option>
</select>
<script type="text/javascript">
function changeColor() {
var color = document.getElementById("color").value;
switch(color){
case "green":
document.body.style.backgroundColor = "green";
break;
```

```
case "red":
document.body.style.backgroundColor = "red";
break;
case "blue":
document.body.style.backgroundColor = "blue";
break;
case "yellow":
document.body.style.backgroundColor = "yellow";
break;
default:
document.body.style.backgroundColor = "white";
break;
}
}
</script>
</body>
</html>
```

Q.4 (a) Write a JavaScript function that will open new window when the user will clicks on the button.

```
<html>
<body>
<button onclick="openWin()">Open "New Window"</button>
<script>
 var myWindow;
 function openWin()
 {
myWindow = window.open("", "myWindow", "width=400,height=400");
 myWindow.document.write("<p>Hello Everyone.Welcome to new window.</p>");
 }
</script>
</body>
</html>
```

OR

(b) Write a script for creating following frame structure.

When user click on Frame2 links corresponding data appears in Frame3.

<table>
<tr><td colspan="2">Frame 1</td></tr>
<tr><td>Frame 2
Fruits
Flowers
Cities</td><td>Frame3</td></tr>
</table>

b.

```
<html>
<head>
 <title>Frame Demo</title>
</head>
<body>
<table border="1">
<tr>
<td align="center" colspan="2">
FRAME 1
</td>
</tr>
<tr>
<td>
FRAME 2
<ul>
 <li>
  <a href="fruits.html" target="mainframe">FRUITS</a>
 </li>
 <li>
  <a href="flowers.html" target="mainframe">FLOWERS</a>
 </li>
 <li>
  <a href="cities.html" target="mainframe">CITIES</a>
 </li>
</ul>
</td>
<td>
FRAME 3<BR>
<iframe name="mainframe"></iframe>
</td>
</tr>
```

```
</table>
</body>
</html>
```

Q. 5. (a) Create a webpage to implement Intrinsic JavaScript Function.

a.

```
<html>
<head>
<title>Intrinsic Functions</title>
</head>
<body>
<form name="frm1" action="" method="post">
<p>
Name<input type="text" name="t1"/><br>
Age<input type="text" name="t2"/><br>
<img src="submit.png" height="40" width="50"
onclick="javascript:document.forms.frm1.submit()"/>
<img src="reset.png" height="40" width="50"
onclick="javascript:document.forms.frm1.reset()"/>
</p>
</form>
</body>
</html>
```

OR

(b) Write a JavaScript code to display all characters of string in lowercase.

b.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Lowercase Converter</title>
</head>
<body>
    <h1>Convert to Lowercase</h1>
```

```
    <input type="text" id="inputString" placeholder="Type here">
    <button onclick="showLowercase()">Convert</button>
    <p id="result"></p>

        function showLowercase() {
            var input = document.getElementById("inputString").value; // Get
input value
            document.getElementById("result").innerHTML = input.toLowerCase(); //
Use innerHTML to set text
        }
    </script>
</body>
</html>
```

Q. 6.(a)Write HTML code to design a form that displays textbox for accepting Aadhar Card No.and a Submit button.Aadhar card No. should contain 12 digits in the format nnnn.nnnn.nnnn. Write JavaScript code to validate the Aadhar Card No.. When the user clicks on SUBMIT button.

a.

```
<!DOCTYPE html>
<html>
<head>
    <title>Aadhaar Card Validation</title>
</head>
<body>
    <h2>Aadhaar Card Validation</h2>
    <form>
        <label for="aadhaar">Aadhaar Number:</label>
        <input type="text" id="aadhaar" name="aadhaar">
        <br><br>
        <input type="button" value="Submit" onclick="validateAadhaar()">
    </form>

    <script>
```

```
        function validateAadhaar() {
            var aadhaar = document.getElementById("aadhaar").value;
            var aadhaarPattern = /^\d{4}\.\d{4}\.\d{4}$/;

            if (aadhaarPattern.test(aadhaar)) {
                alert("Aadhaar number is valid.");
            } else {
                alert("Please enter a valid 12-digit Aadhaar number in the format
nnnn.nnnn.nnnn");
            }
        }
    </script>
</body>
</html>
```

OR

(b) Write a JavaScript code to implement number is even or odd

b.

```
<!DOCTYPE html>
<html>
<head>
    <title>Even or Odd Checker</title>
</head>
<body>
    <script>
        var number = parseInt(prompt("Enter any number:"));

        if (number % 2 === 0) {
            document.write(number + " is even.");
        } else {
            document.write(number + " is odd.");
        }
    </script>
</body>
</html>
```

Q. 7 (a) Develop JavaScript to implement Array functionalities.(unshift, shift, push, pop).

```
<!DOCTYPE html>
<html>
<head>
    <title>Array Operations</title>
</head>
<body>
    <button onclick="addFirst()">Add to Beginning</button>
    <button onclick="removeFirst()">Remove from Beginning</button>
    <button onclick="addLast()">Add to End</button>
    <button onclick="removeLast()">Remove from End</button>
    <p id="result"></p>

    <script>
        var myArray = [];
        var numElements = parseInt(prompt("Enter the number of elements:"));

        for (var i = 0; i < numElements; i++) {
            var element = parseInt(prompt("Enter element  " + (i + 1) + ":"));
            myArray[i]=element;
        }


        function addFirst() {
            var element = parseInt(prompt("Enter element to add:"));
            myArray.unshift(element);
            displayArray();
        }

        function removeFirst() {
            myArray.shift();
            displayArray();
        }

        function addLast() {
            var element = parseInt(prompt("Enter element to add:"));
            myArray.push(element);
            displayArray();
        }

        function removeLast() {
            myArray.pop();
            displayArray();
        }

        function displayArray() {
```

```
            document.getElementById("result").innerHTML = "Array: " + myArray;
        }

        displayArray();
    </script>
</body>
</html>
```

OR

(b) Write a Javascript code to demonstrate Evaluate checkbox.

```
<html>
 <head>
  <title>HTML Form</title>
  <script language="javascript" type="text/javascript">
  function selection()
  {
   var x ="You selected: ";
   with(document.forms.myform)
   {
    if(a.checked == true)
    {
      x+= a.value+ " ";
    }
    if(b.checked == true)
    {
      x+= b.value+ " ";
    }
    if(o.checked == true)
    {
      x+= o.value+ " ";
    }
    if(p.checked == true)
    {
      x+= p.value+ " ";
    }
    if(g.checked == true)
    {
```

```
      x+= g.value+ " ";
    }
    document.write(x);
   }
  }
  </script>
 </head>
 <body>
  <form name="myform" action="" method="post">
     Select Your Favourite Fruits: <br>
     <input type="checkbox" name="a" value="Apple">Apple
     <input type="checkbox" name="b" value="Banana">Banana
     <input type="checkbox" name="o" value="Orange">Orange
     <input type="checkbox" name="p" value="Pear">Pear
     <input type="checkbox" name="g" value="Grapes">Grapes
     <input type="reset" value="Show" onclick="selection()">
  </form>
 </body>
</html>

  </form>
 </body>
</html>
```

Q. 8 (a) Write a JavaScript code to implement number is even or odd.

a.

```
<!DOCTYPE html>
<html>
<head>
    <title>Even or Odd Checker</title>
</head>
<body>
    <script>
        var number = parseInt(prompt("Enter any number:"));

        if (number % 2 === 0) {
            document.write(number + " is even.");
        } else {
            document.write(number + " is odd.");
        }
```

```
    </script>
</body>
</html>
```

OR

(b) Develop a webpage for validation of form fields using regular expressions.

```
<!DOCTYPE html>
<html>
<head>
    <title>Form Validation</title>
</head>
<body>
    <h1>Form Validation</h1>
    <form onsubmit="return validateForm()">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required>
        <br><br>

        <label for="email">Email:</label>
        <input type="email" id="email" name="email" required>
        <br><br>

        <label for="password">Password:</label>
        <input type="password" id="password" name="password" required>
        <br><br>

        <input type="submit" value="Submit">
    </form>

    <script>
        function validateForm() {
            var name = document.getElementById("name").value;
            var email = document.getElementById("email").value;
            var password = document.getElementById("password").value;

            var nameRegex = /^[a-zA-Z ]+$/;
            var emailRegex = /\S+@\S+\.\S+/;
            var passwordRegex = /^(?=.*\d)(?=.*[a-z])(?=.*[A-Z]).{8,}$/;

            if (!nameRegex.test(name)) {
                alert("Name should only contain letters and spaces.");
```

```
                return false;
            }

            if (!emailRegex.test(email)) {
                alert("Invalid email format.");
                return false;
            }

            if (!passwordRegex.test(password)) {
                alert("Password must be at least 8 characters long and contain at
least one digit, one lowercase letter, and one uppercase letter.");
                return false;
            }

            return true;
        }
    </script>
</body>
</html>
```

Q. 9.(a) Develop a webpage for implementing Banner.

```
<html >
<head>
<title>Banner Ads</title>
<script>
Banners = new Array('1.png','2.png','3.png');
CurrentBanner = 0;
function DisplayBanners()
{
if (document.images);
 {
CurrentBanner++;
if (CurrentBanner == Banners.length)
{
CurrentBanner = 0;

}
document.RotateBanner.src= Banners[CurrentBanner];
setTimeout("DisplayBanners()",1000);
```

```
}
}
</script>
</head>
<body onload="DisplayBanners()" >
<center>
<img src="1.jpg" width="400"
height="75" name="RotateBanner" />
</center>
</body>
```

OR

(b) Develop a webpage for placing the Window on the screen and Working with child window.

Parent window code:

```
<!DOCTYPE html>
<html>
<head>
  <title>Parent Window</title>
</head>
<body>
  <button onclick="openChildWindow()">Open Child
Window</button>

  <script>
    function openChildWindow() {
      window.open("child_window.html", "childWindow",
"width=400,height=300");
    }
  </script>
</body>
</html>
```

Child window code:

```
<!DOCTYPE html>
<html>
<head>
   <title>Child Window</title>
</head>
<body>
   <p>This is a child window.</p>
</body>
</html>
```

Q. 10. (a) Create a webpage to implement following Form Events.

1. Onblur Events
2. Onfocus Events.

```
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction(x) {
  x.style.background = "yellow";
}

function myBlurFunction(x) {
  x.style.background = "";
}
</script>
</head>
<body>
  Enter your name: <input type="text" name="f1" onfocus="myFunction(this)"
onblur="myBlurFunction(this)">
</body>
</html>
```

OR

(b) Write a JavaScript program to create a slide show with the group of four images also simulate the next and previous transition between slides in your JavaScript.

```
<html>
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-
scale=1.0">
   <title>Slideshow</title>
   <script>
      const imgArray = ['1.jpg’, '2.jpg’,’3.jpg’,’4.jpg’];
      let imgIndex = 0;

      function displayImg(num) {
         imgIndex += num;
         if (imgIndex > imgArray.length - 1) {
            imgIndex = 0;
         }
         if (imgIndex < 0) {
            imgIndex = imgArray.length - 1;
         }
         document.getElementById('slide').src = imgArray[imgIndex];
      }

      window.onload = function() {
         document.getElementById('prevBtn').addEventListener('click', ()
=> displayImg(-1));
         document.getElementById('nextBtn').addEventListener('click', ()
=> displayImg(1));
      };
   </script>
</head>
<body>
```

```
  <img id="slide" src="flower3.jpg" width="800" height="800"
alt="Slideshow Image"/>
  <br><br>
  <input type="button" id="prevBtn" value="Previous">
  <input type="button" id="nextBtn" value="Next">
</body>
</html>
```

Q. 11 (a) Write a JavaScript to check whether passed number is palindrome or not.

```
<!DOCTYPE html>
<html>
<head>
  <title>Palindrome Number Checker</title>
</head>
<body>
  <input type="number" id="inputNumber" placeholder="Enter a number">
  <button onclick="checkPalindrome()">Check</button>

  <script>
    function checkPalindrome() {
      const num = parseInt(document.getElementById("inputNumber").value);
      const str = num.toString();
      const reversedStr = str.split('').reverse().join('');
      const reversedNum = parseInt(reversedStr);

      if (num === reversedNum) {
        alert(num + " is a palindrome number.");
      } else {
        alert(num + " is not a palindrome number.");
      }
    }
  </script>
</body>
</html>
```

OR

(b) Create a Webpage Student Registration form using Form Elements.

```
<!DOCTYPE html>
<html>
<head>
    <title>Engineering Student Registration Form</title>
</head>
<body>
    <h1>Engineering Student Registration Form</h1>
    <form action="process_form.php" method="post">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required>
        <br><br>

        <label for="email">Email:</label>
        <input type="email" id="email" name="email" required>
        <br><br>

        <label for="phone">Phone Number:</label>
        <input type="tel" id="phone" name="phone" pattern="[0-9]{10}" required>
        <br><br>

        <label for="address">Address:</label>
        <textarea id="address" name="address" required></textarea>
        <br><br>

        <label for="program">Program:</label>
        <select id="program" name="program" required>
            <option value="">Select Program</option>
            <option value="Computer Science">Computer Science</option>
            <option value="Electrical Engineering">Electrical
Engineering</option>
            <option value="Mechanical Engineering">Mechanical
Engineering</option>
            <option value="Civil Engineering">Civil Engineering</option>
            </select>
        <br><br>

        <label for="year">Year of Study:</label>
        <select id="year" name="year" required>
            <option value="">Select Year</option>
```

```
            <option value="1">1st Year</option>
            <option value="2">2nd Year</option>
            <option value="3">3rd Year</option>
            <option value="4">4th Year</option>
        </select>
        <br><br>

        <label>Programming Languages:</label>
        <input type="checkbox" name="languages[]" value="Python"> Python
        <input type="checkbox" name="languages[]" value="Java"> Java
        <input type="checkbox" name="languages[]" value="C++"> C++
        <input type="checkbox" name="languages[]" value="JavaScript"> JavaScript
        <br><br>


        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

Q. 12 (a) Develop a webpage for implementing Status bars.

```
<!DOCTYPE html>
<html>
<head>
<script type="text/javascript">
window.status="Welcome to Home Page";
</script>
</head>
<body>
<h1>Hello, welcome to JavaScript</h1>
</body>
</html>
```

OR

(b) Write a JavaScript code to implement web page protection.

```
<html>
<head>
<title> Disanling Right Mouse button</title>
<script>
```

```
document.addEventListener('contextmenu', event => event.preventDefault());
</script>
</head>
<body>
<h1> <p> Disabling the right click of mouse button</p></h1>
</body>
</html>
```

Q. 13 (a) Write a Java script to create person object with properties firstname, lastname, age, eyecolor, delete eyecolor property and display remaining properties of person object.

```
<!DOCTYPE html>
<html>
<head>
    <title>Object Demonstration</title>
</head>
<body>
    <script>
        var person = {
            firstName: "John",
            lastName: "Doe",
            age: 30,
            eyeColor: "blue"
        };

        document.write("Before deletion:<br>");
        document.write("First Name: " + person.firstName + "<br>");
        document.write("Last Name: " + person.lastName + "<br>");
        document.write("Age: " + person.age + "<br>");
        document.write("Eye Color: " + person.eyeColor + "<br>");

        delete person.eyeColor;

        document.write("<br>After deletion:<br>");
        document.write("First Name: " + person.firstName + "<br>");
        document.write("Last Name: " + person.lastName + "<br>");
        document.write("Age: " + person.age);
    </script>
```

```
</body>
</html>
```

OR

(b) Write a JavaScript function to check the first character of a string is uppercase or not.

```
<html>
<body>
<script>
function upper_case(str)
{
   regexp = /^[A-Z]/;
   if (regexp.test(str))
    {
      document.write(str+"'s first character is uppercase");

    }
    else
    {
     document.write(str+"'s first character is not uppercase");
    }
}
var str=prompt("Enter any String :");
upper_case(str);
</script>
</body>
</html>
```

Q. 14 (a) Write a Java script that initializes an array called flowers with the names of 3 flowers. The script then displays array elements.

```
<html>
    <head>
        <title>Display Array Elements</title>
    </head>
    <body>
    <script>
    var flowers = new Array();
    flowers[0] = 'Rose ';
    flowers[1] = 'Mogra';
    flowers[2] = 'Hibiscus';
    for (var i = 0; i < flowers.length; i++)
    {
    document.write(flowers[i] + '<br>');
    }
    </script>
     </body>
   </html>
```

OR

(b) Write a JavaScript program that will remove the duplicate element from an array.

```
<!DOCTYPE html>
<html>
<head>
    <title>Remove Duplicates</title>
</head>
<body>
    <script>
        var arr = ["scale", "happy", "strength", "peace", "happy", "happy"];
        document.write("<h4>"+"Array before removing duplicates: "+"</h4>" + arr
+ "<br>");

        function removeDuplicates(arr) {
            var unique = [];
            for (var i = 0; i < arr.length; i++) {
                if (!unique.includes(arr[i])) {
                    unique.push(arr[i]);
                }
            }
```

```
            return unique;
        }

        var uniqueArray = removeDuplicates(arr);
        document.write("<h4>"+"Array after removing duplicates:"+ "</h4>"+
uniqueArray);
    </script>
</body>
</html>
```

Q. 15(a) Write Javascript to call function from HTML.

```
<!DOCTYPE html>
<html>
<head>
    <title>Calling a JavaScript Function</title>
</head>
<body>
    <button onclick="greet()">Click me</button>

    <script>
        function greet() {
            alert("Hello, world!");
        }
    </script>
</body>
</html>
```

OR

(b) Write a JavaScript that accents user's first name and domain name of Organization from user. The JavaScript then forms email address as <firstname@domain> name and displays the results in the browser window.

```
<html>
```

```
   <head>
      <script>
   //Email Address Function
function myemail()
{
   var s1 = document.getElementById("first").value;
   var s2 = document.getElementById("domain").value;
   var s3=s1+"@"+s2;
   document.getElementById("email").innerHTML = s3;
}
    </script>
   </head>
   <body>
       <p>First Name: <input id="first"></p>
      <p>Domain Name: <input id="domain"></p>
      <button onclick="myemail()">create email id</button>
      <br>   Email ID is
      <p id="email"> </p>
 </body>
</html>
```

Q. 16 (a) Write a java script to demonstrate the use of “with” clause.

```
<!DOCTYPE html>
<html>
<head>
    <title>Using with Statement</title>
</head>
<body>
    <script>
        var person = {
            name: "Abc",
            age: 18
        };

        with (person) {
            document.write(name);
            document.write("<br>");
            document.write(age);
        }
```

```
    </script>
</body>
</html>
```

OR

(b) Write a javascript such that color of the background is changed after every 5 seconds.(use setInterval() method).

```
<!DOCTYPE html>
<html>
<head>
    <title>Color Changing Page</title>
    <script>
        function changeColor() {
            var colors = ["red", "green", "blue", "yellow", "purple"];
            var  index = 0;

            setInterval(() => {
                document.body.style.backgroundColor = colors[index];
                index = (index + 1) % colors.length;
            }, 5000);
        }

        window.onload = changeColor;
    </script>
</head>
<body>
    </body>
</html>
```

Q. 17 (a) Write a JavaScript program that will print even numbers from 1 to 20 .

```
<!DOCTYPE html>
<html>
<head>
    <title>Even Numbers</title>
</head>
<body>
    <script>
        for (var i = 2; i <= 20; i += 2) {
```

```
            document.write(i + "<br>");
        }
    </script>
</body>
</html>
```

OR

(b) Write a javascript to demonstrate Associative array.

```
<!DOCTYPE html>
<html>
<head>
    <title>Associative Array Example</title>
</head>
<body>
    <script>
        var person = {
            firstName: "John",
            lastName: "Doe",
            age: 30,
            city: "New York"
        };

        document.write("First Name: " + person.firstName + "<br>");
        document.write("Last Name: " + person.lastName + "<br>");
        document.write("Age: " + person.age + "<br>");
        document.write("City: 1  " + person.city);
    </script>
</body>
</html>
```

Q. 18 (a) Write a javascript code to whether passed string is palindrome or not.

```
<!DOCTYPE html>
<html>
<head>
    <title>Palindrome Checker</title>
</head>
<body>
```

```
    <script>
        function isPalindrome(str) {
            var reversedStr = str.split('').reverse().join('');
            return str === reversedStr;
        }

        var inputString = prompt("Enter a string to check:");
        var result = isPalindrome(inputString);

        if (result) {
            alert(inputString + " is a palindrome.");
        } else {
            alert(inputString + " is not a palindrome."); 1
        }
    </script>
</body>
</html>
```

OR

(b) Write a JavaScript function to check whether a given address is a valid IPV4 address or not.

```
<!DOCTYPE html>
<html>
<head>
    <title>IP Address Validation</title>
</head>
<body>
    <script>
        function isValidIPAddress(address) {
            const ipv4Regex = /^(\d{1,3})\.(\d{1,3})\.(\d{1,3})\.(\d{1,3})$/;
            const match = address.match(ipv4Regex);

            if (match) {
                for (let i = 1; i <= 4; i++) {
                    const part = parseInt(match[i]);
                    if (part < 0 || part > 255 || isNaN(part)) {
                        return false;
                    }
                }
                return true;
            } else {
```

```
                return false;
            }
        }

        var ipAddress = prompt("Enter an IP address:");
        if (isValidIPAddress(ipAddress)) {
            alert(ipAddress + " is a valid IP address.");
        } else {
            alert(ipAddress + " is not a valid IP address.");
        }
    </script>
</body>
</html>
```

Q. 19 (a) Demonstrate the use of Location Object.

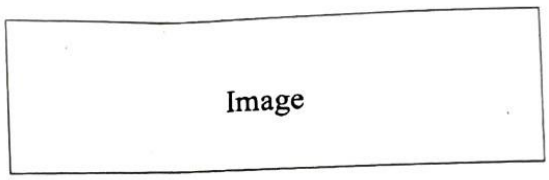
```
<!DOCTYPE html>
<html>
<body>
  <h1>The Window Location Object</h1>
  <p id="demo"></p>
  <script>
    var origin=window.location.origin;

    document.getElementById("demo").innerHTML = origin;
  </script>
</body>
</html>
```

OR

(b) Write an HTML script that displays names of different brands of Laptop and an respective image as :

- Lenovo
- HP
- DELL




```
<html>
    <head>
        <title>
            text rollovers</title>
            <script>
            b=new Image;
            r=new Image;
            g=new Image;
            if(document.images)
            {
            b.src='vv.png';
            r.src='hp.png';
            g.src='dell.png';
            }
            else
            {
            b.src='';
            r.src='';
            g.src='';
            document.clr='';
            }

            </script>
            </head>
            <body>
            <table border="0" width="100%">
            <tbody>
            <tr valign="top">

            <td><H2><ul><li>
            <a onmouseover="document.clr.src='vv.png'">
            <b><u>Lenovo</u></b></a></li>
            <li><a onmouseover="document.clr.src='hp.png'">
            <b><u>HP</u></b></a></li>
            <li><a onmouseover="document.clr.src='dell.png'">
            <b><u>DELL</u></b></a></li></ul>
            </H2>
```

```
</td>
<td width="50%">
<a><img height="200" src="vv.png" width=400" name="clr"></a></td>
</tr>
</tbody>
</table>
</body>
</html>
```

Q .20 (a) Write a program using sort method of array object.

```
<html>
    <body>

<script>



     var arr = [45,12,32,78] ;
     document.write("Original Array="+arr);
     document.write("<br>Sorted Array="+arr.sort());

 </script>
 </body>
 </html>
```

OR

(b) Write a program for text rollover.

```
<html>
<head></head>
<Body>
<textarea rows="2" cols="50" name="rollovertext" onmouseover="this.value='What is
rollover?'"
onmouseout="this.value='Rollover means a webpage changes when the user moves his
or her mouse over an object on the page'">
</textarea>
</body>
</html>
```

Q.21 (a) Write a program to accept Student name from user. Using prompt() method.

```
<!DOCTYPE html>
<html>
<head>
    <title>Student Name</title>
</head>
<body>
    <script>
        var studentName = prompt("Enter student name:");
        document.write("Student name: " + studentName);
    </script>
</body>
</html>
```

OR

(b) Write a JavaScript that will replace following specified value with another value in string.

String = “I will fail”

Replace “fail” by “pass”

```
<!DOCTYPE html>
<html>
<head>
    <title>String Replacement</title>
</head>
<body>
    <script>
        var str = "I will fail";
        var newStr = str.replace("fail", "pass");
```

```
        document.write("old string:"+str+"<br>");
        document.write("new sting:"+newStr);
    </script>
</body>
</html>
```

Q.22 (a) Write a program to print odd numbers from 1 to 100.

```
<!DOCTYPE html>
<html>
<head>
    <title>Even Numbers</title>
</head>
<body>
    <script>
        for (var i = 1; i <= 100; i += 2) {
            document.write(i + "<br>");
        }
    </script>
</body>
</html>
```

OR

(b) Write an HTML script that accepts Amount, Rate of interest and Period from user. When user submits the information a

JavaScript function must calculate and display simple interest in a message box. (Use formula S.I. = PNR/100) .

```
<!DOCTYPE html>
<html>
<head>
    <title>Simple Interest Calculator</title>
</head>
<body>
    <h1>Simple Interest Calculator</h1>
    <form onsubmit="calculateInterest(); return false;">
        <label for="amount">Amount:</label>
        <input type="number" id="amount" name="amount" required><br><br>

        <label for="rate">Rate of Interest:</label>
        <input type="number" id="rate" name="rate" required><br><br>

        <label for="period">Period (in years):</label>
        <input type="number" id="period" name="period" required><br><br>

        <input type="submit" value="Calculate">
    </form>

    <script>
        function calculateInterest() {
            var amount = parseFloat(document.getElementById("amount").value);
            var rate = parseFloat(document.getElementById("rate").value);
            var period = parseFloat(document.getElementById("period").value);

            var simpleInterest = (amount * rate * period) / 100;

            alert("Simple Interest: " + simpleInterest);
        }
    </script>
</body>
</html>
```