

Java Script

Question - 1

Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js1</title>
</head>
<body>
  <table border="1">
<tr>
  <th>Number</th>
  <th>Square</th>
  <th>Cube</th>
</tr>

<script>
  for(i=0;i<=10;i++){
document.write("<tr><td>" + i + "</td><td>" + i**2 + "</td><td>" + i**3 +
"</td></tr>")
  }
</script>
  </table>
</body>
</html>
```

Question - 2

Write a JavaScript function to extract unique characters from a string.

Example string : "thequickbrownfoxjumpsoverthelazydog"

Expected Output : "thequickbrownfxjmpsvlazydg"

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js2</title>
</head>
<body>
  String: <textarea id="str"></textarea>
  <br><br>
  <input type="button" value="Extract" onclick="ex()">
  <br>
  <p id="res"></p>

  <script>
    function ex(){
      let str = document.getElementById('str').value;
      let res = "";
      let i,j;
      for(i=0;i< str.length ;i++){
        for(j=i-1;j>=0;j--){
          if(str.charAt(i)==str.charAt(j)){
            break;
          }
        }
        if(j<0){
          res += str.charAt(i);
        }
      }

      document.getElementById('res').innerHTML = res;
    }
  </script>
</body>
</html>
```

Question – 3

Write a JavaScript program which accept a string as input and swap the case of each character.

For example: if you input 'The Quick Brown Fox' the output should be 'tHE qUICK bROWN fOX'.

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js3</title>
</head>
<body>
  Enter Text Here :
  <textarea name="" id="str" cols="30" rows="10"></textarea>
  <br><br>
  <input type="button" value="Invert Case" onclick="invert()">
  <br>
  <p id="res"></p>

  <script>
    function invert(){
      let str = document.getElementById("str").value;
      let res = "";
      for(i=0;i<str.length;i++){
        if(str.charCodeAt(i)>=65 && str.charCodeAt(i)<=90){
          res += str.charAt(i).toLowerCase();
        }
        else if(str.charCodeAt(i)>=97 &&
str.charCodeAt(i)<=123){
          res += str.charAt(i).toUpperCase();
        }
        else{
          res += str.charAt(i);
        }
      }
      document.getElementById("res").innerHTML = res;
    }
  </script>
</body>
</html>
```

Question – 4

Write a JavaScript script to display the current day and time in the following format. Sample Output : Today is : Friday. Current time is : 4 PM : 50 : 22

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js4</title>
</head>
<body>
  <p id="res"></p>

  <script>
    function clock(){
      let today , day , daylist , h , m , s , mode;
      today = new Date();
      daylist =
[ 'Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', '
Saturday' ];
      mode = [ 'AM', 'PM' ];
      day = today.getDay();
      h = today.getHours();
      m = today.getMinutes();
      s = today.getSeconds();

      document.getElementById("res").innerHTML = "Today is :
"+daylist[day]+" . Current time is : " + h%12 +
mode[parseInt(h/12)]+": "+m+": "+s
    }
    {setInterval(clock,1000)}
  </script>
</body>
</html>
```

Question – 5

Write a JavaScript Code to print the current date in DD-MON-YYYY format.

Example: 26-JAN-2020

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>js5</title>
</head>
<body>
  <p id="clock"></p>

  <script>
    function clock(){
      let today , dd , mm , yy , months ;
      today = new Date();
      months =
['Jan', 'Feb', 'Mar', 'Apr', 'May', 'Jun', 'Jul', 'Aug', 'Sep', 'Oct', '
Nov', 'Dec'];
      dd = today.getDate();
      mm = today.getMonth();
      yy = today.getFullYear();

      document.getElementById('clock').innerHTML = dd
+"-"+months[mm]+"-"+yy;
    }
    {setInterval(clock,1000)}
  </script>
</body>
</html>
```

Question – 6

calculator program in javascript

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js6</title>
  <style>
    *{
      margin: 0px;
      padding: 0px;
    }
    table{
      margin: 2vw;
    }
    #d {
      display: inline-block;
      width: 180px;
      height: 40px;
      text-align: right;
      font-size: 25px;
      background-color:lightgray;
      border: none;
      padding: 2px;
    }
    input[type="button"]{
      display: inline-block;
      width: 40px;
      height: 40px;
      margin: 1px;
      font-size: 20px;
    }
  </style>
</head>
<body>
  <table>
    <tr>
      <td colspan="4"><input type="text" id="d"></td>
    </tr>
    <tr>
```

```
        <td><input type="button" value="AC"
onclick="d.value=''></td>
        <td><input type="button" value="^"
onclick="d.value=d.value**2"></td>
        <td><input type="button" value="%"
onclick="d.value=d.value/100"></td>
        <td><input type="button" value="÷"
onclick="d.value+= '/' "></td>
    </tr>
    <tr>
        <td><input type="button" value="7"
onclick="d.value+='7' "></td>
        <td><input type="button" value="8"
onclick="d.value+='8' "></td>
        <td><input type="button" value="9"
onclick="d.value+='9' "></td>
        <td><input type="button" value="×"
onclick="d.value+='* ' "></td>
    </tr>
    <tr>
        <td><input type="button" value="4"
onclick="d.value+='4' "></td>
        <td><input type="button" value="5"
onclick="d.value+='5' "></td>
        <td><input type="button" value="6"
onclick="d.value+='6' "></td>
        <td><input type="button" value="-"
onclick="d.value+=' - ' "></td>
    </tr>
    <tr>
        <td><input type="button" value="1"
onclick="d.value+='1' "></td>
        <td><input type="button" value="2"
onclick="d.value+='2' "></td>
        <td><input type="button" value="3"
onclick="d.value+='3' "></td>
        <td><input type="button" value="+"
onclick="d.value+='+' "></td>
    </tr>
    <tr>
        <td><input type="button" value="0"
onclick="d.value+='0' "></td>
```

```

        <td><input type="button" value="."
onclick="d.value+='.'"></td>
        <td><input type="button" value="#10007;"
onclick="d.value=d.value.toString().slice(0,-1)"></td>
        <td><input type="button" value="&equals;"
onclick="d.value=d.value=eval(d.value)"></td>
    </tr>
</table>
</body>
</html>

```

Question – 7

Java Script Program to Change the Page Background Color Based on User Input

Ans:

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>js7</title>
</head>
<body id="bg">
    Select Color: <input type="color" id="color"
onchange="changeBgColor()">

    <script>
        function changeBgColor(){
            let color = document.getElementById('color').value;
            document.getElementById('bg').style.backgroundColor =
color ;
        }
    </script>
</body>
</html>

```


Question – 8

JavaScript program to convert any amount from dollar to rupee

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>js8</title>
</head>
<body>
  <input type="text" id="dollar" value="1"
onchange="rupee.value = this.value * 82.23"> Dollar
  <br><br>
  <input type="text" id="rupee" onchange="dollar.value =
this.value / 82.23"> Rupee
</body>
</html>
```

Question – 9

JavaScript Calulatore design and program

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js9</title>
  <style>
    *{
      margin: 0px;
      padding: 0px;
    }
    table{
      margin: 2vw;
    }
    #d {
      display: inline-block;
      width: 180px;
      height: 40px;
      text-align: right;
      font-size: 25px;
      background-color:lightgray;
      border: none;
      padding: 2px;
      border-radius: 10px;
    }
    input[type="button"]{
      display: inline-block;
      width: 40px;
      height: 40px;
      margin: 1px;
      font-size: 20px;
      border:1px solid wheat;
      border-radius: 50%;
      background-color:lightcyan;
      text-shadow: 1px 1px 1px wheat;
    }
    tr td:last-child input{
      background-color:lightblue;
    }
    tr:nth-child(2) td input {
```

```

        background-color:lightblue;
    }
    tr:nth-child(2) td:first-child input{
        background-color: palegoldenrod;
    }
</style>
</head>
<body>
    <table>
        <tr>
            <td colspan="4"><input type="text" id="d"></td>
        </tr>
        <tr>
            <td><input type="button" value="AC"
onclick="d.value=''></td>
            <td><input type="button" value="^"
onclick="d.value=d.value**2"></td>
            <td><input type="button" value="%"
onclick="d.value=d.value/100"></td>
            <td><input type="button" value="÷"
onclick="d.value+= '/' "></td>
        </tr>
        <tr>
            <td><input type="button" value="7"
onclick="d.value+='7' "></td>
            <td><input type="button" value="8"
onclick="d.value+='8' "></td>
            <td><input type="button" value="9"
onclick="d.value+='9' "></td>
            <td><input type="button" value="×"
onclick="d.value+= '*' "></td>
        </tr>
        <tr>
            <td><input type="button" value="4"
onclick="d.value+='4' "></td>
            <td><input type="button" value="5"
onclick="d.value+='5' "></td>
            <td><input type="button" value="6"
onclick="d.value+='6' "></td>
            <td><input type="button" value="-"
onclick="d.value+= '-' "></td>
        </tr>
    </table>

```

```
        <td><input type="button" value="1"
onclick="d.value+='1'"></td>
        <td><input type="button" value="2"
onclick="d.value+='2'"></td>
        <td><input type="button" value="3"
onclick="d.value+='3'"></td>
        <td><input type="button" value="+"
onclick="d.value+='+'"></td>
    </tr>
    <tr>
        <td><input type="button" value="0"
onclick="d.value+='0'"></td>
        <td><input type="button" value="."
onclick="d.value+='.'"></td>
        <td><input type="button" value="#10007;"
onclick="d.value=d.value.toString().slice(0,-1)"></td>
        <td><input type="button" value="&equals;"
onclick="d.value=d.value=eval(d.value)"></td>
    </tr>
</table>
</body>
</html>
```

Question – 11

Define a function max() that takes two numbers as arguments and returns the largest of them. Use the if-then-else construct available in Javascript.

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js11</title>
</head>
<body>
  <script>
    let x = parseFloat(prompt("Enter First Number",""));
    let y = parseFloat(prompt("Enter Second Number",""));
    max(x,y);
    function max(x,y){
      if(x>y){
        alert("Largest Number is : "+x);
      }
      else if(x<y){
        alert("Largest Number is : "+y);
      }
      else if(x==y){
        alert("Both are equal : "+x);
      }
      else{
        alert("Invalid input")
      }
    }
  </script>
</body>
</html>
```

Question – 12

Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js12</title>
</head>
<body>
  Number 1: <input type="text" id="num1">
  <br><br>
  Number 2: <input type="text" id="num2">
  <br><br>
  Operator:
  <Select id="ope">
<option value="+">+</option>
<option value="-">-</option>
<option value="*">*</option>
<option value="/">/</option>
  </Select>
  <br><br>
  Result: <input type="text" id="res">
  <br><br>
  <input type="button" value="Calculate" onclick="cal()">
</body>

<script>
  function cal(){
    let num1 =
parseFloat(document.getElementById('num1').value);
    let num2 =
parseFloat(document.getElementById('num2').value);
    let ope = document.getElementById('ope').value;

    switch(ope){
      case '+':
        document.getElementById('res').value = num1 + num2;
        break;
      case '-':
        document.getElementById('res').value = num1 - num2;
        break;
```

```
    case '*':
    document.getElementById('res').value = num1 * num2;
    break;
    case '/':
    document.getElementById('res').value = num1 / num2;
    break;
  }
}
</script>
</html>
```

Question - 13

JavaScript program to validate a date

Ans:

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

<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>js13</title>
</head>

<body>
  Date: <input type="text" id="date" placeholder="dd/mm/yyyy">
  <br><br>
  <input type="button" value="OK" onclick="checkDate()">

  <script>
    function checkDate() {
      let date = document.getElementById('date').value;
      let regx = /^(0[1-9]|[12][0-9]|3[01])[\\/](0[1-9]|1[012])
[\\/]((19|20)[0-9]{2})$/
      if (date == "") {
        alert("Please enter the date");
      }
      else if (!date.match(regx)) {
        alert("Please Enter a Valid Date Format")
      }
      else{
        alert("This is Valid Date")
      }
    }
  </script>
</body>

</html>
```


Question - 14

JavaScript code to validate an IP address given by user.

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>js14</title>
</head>
<body>
  IP address: <input type="text" id="ip" placeholder="ex:-
255.255.255">
  <br><br>
  <input type="button" value="OK" onclick="checkIp()">

  <script>
    function checkIp() {
      let ip = document.getElementById('ip').value;
      let regx = /^[0-9]|[1-9][0-9]||1[0-9][0-9]|2[0-4][0-9]|
25[0-5])\.([0-9]|[1-9][0-9]||1[0-9][0-9]|2[0-4][0-9]|25[0-
5])\.([0-9]|[1-9][0-9]||1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.([0-
9]|[1-9][0-9]||1[0-9][0-9]|2[0-4][0-9]|25[0-5])$/
      if (ip == "") {
        alert("Please enter the IP");
      }
      else if (!ip.match(regx)) {
        alert("Please Enter a Valid IP ")
      }
      else{
        alert("This is Valid IP")
      }
    }
  </script>
</body>
</html>
```

Question - 15

JavaScript code to validate a Basic html Form

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>js15</title>
</head>
<body>

  <form action="" onsubmit="return valid()" name="form">
    <table cellpadding="20px">
      <tr>
        <th colspan="3"><h1>Registration Form</h1></th>
      </tr>
      <tr>
        <td>Name</td>
        <td><input type="text" name="name"></td>
        <td><span id="error1" style="color: red;font-size:small;"></span></td>
      </tr>
      <tr>
        <td>Email</td>
        <td><input type="text" name="email"></td>
        <td><span id="error2" style="color: red;font-size:small;"></span></td>
      </tr>
      <tr>
        <td>Mobile No.</td>
        <td><input type="text" name="mob"></td>
        <td><span id="error3" style="color: red;font-size:small;"></span></td>
      </tr>
      <tr>
        <td>Password</td>
        <td><input type="text" name="pass1"></td>
        <td><span id="error4" style="color: red;font-size:small;"></span></td>
      </tr>
      <tr>
        <td>Confirm Password</td>
        <td><input type="text" name="pass2"></td>
```

```

        <td><span id="error5" style="color: red;font-size:small;"></span></td>
    </tr>
    <tr>
        <th><input type="submit" value="Register"></th>
        <th></th>
        <th><input type="reset" value="Reset"></th>
    </tr>
</table>
</form>

```

```

<script>
function valid(){
    let name , email , mob , pass1 , pass2 ;
    name  = document.form.name.value ;
    email = document.form.email.value ;
    mob   = document.form.mob.value ;
    pass1 = document.form.pass1.value ;
    pass2 = document.form.pass2.value ;

    if(name == ""){
        document.getElementById('error1').innerHTML = "* Name
can't be blank";
        return false;
    }

    if(!email.match(/^[A-Za-z]+[a-zA-Z0-9\._-]+[a-zA-Z0-9
9]+)@([a-zA-Z0-9]+).([a-zA-Z]{2,3})$/)){
        document.getElementById('error2').innerHTML = "*
Enter a valid email address";
        return false;
    }

    if(!mob.match(/^[6789][0-9]{9}$/)){
        document.getElementById('error3').innerHTML = "*
Enter valid mobile number";
        return false;
    }

    if(pass1.length<6){
        document.getElementById('error4').innerHTML = "*
Password must be at least 6 characters long";
        return false;
    }
}

```

```
    }
    if(pass1 != pass2){
        document.getElementById('error5').innerHTML = "*
Password must be same";
        return false;
    }
    else{
        alert("Congratulations you have successfully")
    }
}
</script>
</body>
</html>
```

Question - 16

Java script code to show the reservation system of XYZ

Ans:

Question - 17

JavaScript program to change the image on button click

Ans:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>js17</title>
</head>
<body>
  
  <br>
  <input type="button" value="ON"
onclick="change.src='onbulb.jpg'" style="font-size:x-large">
  <input type="button" value="OFF"
onclick="change.src='offbulb.jpg'" style="font-size:x-large">
</body>
</html>
```