



**WINTER – 2023 EXAMINATION Model**

**Answer – Only for the Use of RAC Assessors**

**Subject Name: Client Side Scripting**

**Subject Code:**

**22519**

Important Instructions to examiners:

- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors should not be given more Importance (Not applicable for subject English and Communication Skills).

Q. No.	Sub Q. N.	Answer	Marking Scheme
1		<b>Attempt any <u>FIVE</u> of the following:</b>	<b>10 M</b>
	a)	<b>State meaning of each token of the following statement and describe it:</b> i) ++a; ii) document.bgcolor;	<b>2 M</b>
	Ans	(i) ++ is the increment operator and a is the operand, hence a++ will increment the value of a by 1. (ii) The bgColor property specifies the background color of HTML document.	Anyone explained - 1 M each.
	b)	<b>Write and explain syntax of prompt( ) method in JavaScript.</b>	<b>2 M</b>



<b>Ans</b>	<ul style="list-style-type: none"><li>• <b>prompt()</b> method is used to display a dialogue box to the user to prompt them to an input. □ It has two buttons “OK” and “CANCEL”, if the user click on the “OK” button then it will return the inputted value , if the user clicks on the "CANCEL” button then it will return a null value</li><li>• Syntax: prompt(text)</li></ul>	Definition- 1 M Syntax- 1 M
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- 4) While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate’s answers and model answer.
- 6) In case of some questions credit may be given by judgement on part of examiner of relevant answer based on candidate’s understanding.
- 7) For programming language papers, credit may be given to any other program based on equivalent concept.
- 8) As per the policy decision of Maharashtra State Government, teaching in English/Marathi and Bilingual (English + Marathi) medium is introduced at first year of AICTE diploma Programme from academic year 2021-2022. Hence if the students in first year (first and second semesters) write answers in Marathi or bilingual language (English +Marathi), the Examiner shall consider the same and assess the answer based on matching of concepts with model answer.
- 9) For programming language papers, in answer session comments and output is not required.



□ Example: `<script>`  
var name = prompt ("Enter a  
name"); document. Write(name); `</script>`

c) **List various assignment operators supported by JavaScript, explain any two with the help of suitable example.**

**2 M**

**Ans** **assignment operators supported by JavaScript**

Operators	Meaning
=	Equal to
+=	Plus Equal to
-=	Minus Equal to
/=	Divide Equal to
%=	Modulus Equal to
*=	Multiply Equal to

**Example:**

```
<script>
// = is used to assign a value to a variable
var num = 10;
document.write(num); // num 10
/* += first add the value to the existing value of the variable then assign it the new added value */
num +=10; document.write(num); // num 20 </script>
```

List – 1 M  
Explain any 2  
- 1 M

d) **Differentiate between shift() and push() methods of an Array object.**

**2 M**



<b>Ans</b>	<b>shift</b>	<b>push</b>	Any two points- 1 M each
	1. shift method is used to delete the first element of an existing array	1. push method is used to insert zero or more element at the end of an existing array	
	2. Syntax: arr.shift();	2. Syntax: arr.push(element1,element2,...,elementn);	
	3. Example: <script> var arr = [1,2,3,4]; document.write(arr); arr.shift(); document.write(arr); </script>	3. Example: <script> var arr = [1,2,3,4]; document.write(arr); arr.push(5,6); document.write(arr); </script>	
<b>e)</b>	<b>State the meaning of "Defining a function". Explain with the help of an example.</b>		<b>2 M</b>



<p><b>Ans</b></p>	<ul style="list-style-type: none"> <li>• A function is a block of code that takes some input to perform some certain computation.</li> <li>• The main purpose of the function is to put commonly used or repeatedly used task in a function, so instead of writing the code again and again we can call it instead.</li> <li>• The function can be defined as followed:</li> </ul> <p><b>Syntax:</b></p> <pre>function func_name(parameter1 ,parameter2,...,parametern) { //code }</pre> <p><b>Example:</b></p> <pre>&lt;script&gt; function add(num1,num2) { return num1 + num2; } add(1,2); &lt;/script&gt;</pre>	<p>Explanation- 1 M</p> <p>Example- 1 M</p>
<p><b>f)</b></p>	<p><b>Give syntax of and explain the use of small “with” clause.</b></p>	<p><b>2 M</b></p>
<p><b>Ans</b></p>	<p>“with” clause is used to directly access the properties and method of an object.</p> <p><b>Syntax:</b> with (object) { //object }</p> <p><b>Example:</b></p> <pre>&lt;script&gt; var person ={ name:"Abc", age:18 } with(person){ document.write(name); document.write(age); } &lt;/script&gt;</pre>	<p>Explanation- 1 M</p> <p>Syntax- 1 M</p>
<p><b>g)</b></p>	<p><b>With the help of suitable example explain the Date object and any two methods of Date object.</b></p>	<p><b>2 M</b></p>



	<b>Ans</b>	<b>“Date”</b> object is used when we want to perform some operation on date, it has various method which helps you performs some task related to date, Example:	Explanation- 1 M  Example- 1
		<pre>&lt;script&gt; var date = new Date();  document.write(date.getDate()); // get the current date document.write(date.getFullYear()); // get the current Year document.write(date.getMinutes()); // get the current minutes &lt;/script&gt;</pre>	M
<b>2.</b>		<b>Attempt any <u>THREE</u> of the following:</b>	<b>12 M</b>
	<b>a)</b>	<b>Write a JavaScript that accepts a number and displays addition of digits of that number in a message box.</b>	<b>4 M</b>
	<b>Ans</b>	<pre>&lt;html&gt; &lt;body&gt; &lt;script&gt; var num = prompt(“Enter a 2 digit number:”); //accept number from user var digits = num.split(); var firstdigit = Integer(digits[0]); var seconddigit = Integer(digits[1]); var addition = firstdigit+seconddigit; alert(“The addition is “+addition); //display result in message box &lt;/script&gt; &lt;/body&gt; &lt;/html&gt;</pre>	Relevant code- 4 M
	<b>b)</b>	<b>Describe the navigator object in JavaScript. Describe the methods of navigator object which is used to display browser name and version.</b>	<b>4 M</b>



Ans	<p>□ Navigator object is a representation of user's browser. □ Navigator is an object of window.</p> <p>➤ <b>Methods of navigator object- Only one method is supported by Navigator Object.</b></p> <p>i) javaEnabled()- returns true if the browser has java enabled.</p> <ul style="list-style-type: none"> <li>• We use appName to display browser name. appName is a property of navigator.</li> <li>• appName property returns browser name.</li> <li>• We use appVersion to display browser version. appVersion is a property of navigator.</li> <li>• appVersion property returns browser version.</li> <li>• <b>Example:-</b> &lt;html&gt;</li> </ul> <pre>&lt;body&gt; &lt;script&gt; document.write("Browser name: "+navigator.appName); document.write("Browser Version: "+navigator.appVersion); &lt;/script&gt;</pre>	<p>Explanation - 2 M</p> <p>Method – 2 M</p>
	<pre>&lt;/body&gt; &lt;/html&gt;</pre>	
c)	<p><b>Give syntax of and explain for-in loop in javascript with the help of suitable example.</b></p>	4 M



<b>Ans</b>	<p><b>For-in Loop:</b></p> <p><b>Syntax:-</b></p> <pre>For(x in object){  //code to be executed  }</pre> <ul style="list-style-type: none"><li>• For-in loop is used to loop through the properties of an object.</li><li>• In syntax, variable represents the property name, and object is the object being iterated.</li><li>• It's handy for tasks like accessing or manipulating object properties.</li></ul> <p><b>Example:-</b></p> <pre>&lt;html&gt; &lt;body&gt; &lt;script&gt; Var car = { Brand: 'Toyota', Model: 'Camry', Year: 2022 }; For( key in car){ Document.write('\${key}: \${car[key]}'); } &lt;/script&gt; &lt;/body&gt; &lt;/html&gt;</pre>	Explanation - 2 M Syntax – 1 M Example-1 M
d)	<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)</b>	<b>4 M</b>





<b>Ans</b>	<pre>&lt;html&gt;  &lt;body&gt; &lt;script&gt; var P = parseInt(prompt("Enter the principal amount:")); var N = parseInt(prompt("Enter the period:")); var R = parseInt(prompt("Enter the Rate of interest:")); var SI =(P*N*R)/100; alert("Simple Interest is "+SI);</pre>	Relevant code- 4 M
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```
</script>
</body>
</html>
```

**OR**

```
<html>
<head>
  <script>

    function interest()
    {
      var P, N, R;
      P= parseInt(document.getElementById("pr").value);
      N =
      parseInt(document.getElementById("period").value);      R =
      parseInt(document.getElementById("ri").value);      var SI
      =(P*N*R)/100;
      alert("Simple Interest is="+SI);
    }
  </script>
</head>
<body>
  <p>Principal Amount:<input id="pr"></p>
  <p>Period in Year: <input id="period"></p>
  <p>Rate of Interst: <input id="ri"></p>
  <button onclick="interest()"> Simple Interest</button>
</body>
</html>
```



**Output:**

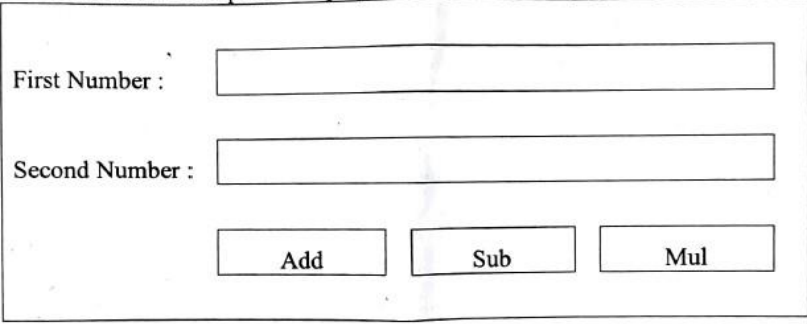
Principal Amount:

Period in Year:

Rate of Interest:

www.w3schools.com says  
Simple Interest is=120  
OK



3.	<b>Attempt any <u>THREE</u> of the following:</b>	<b>12 M</b>	
a)	<b>Write an HTML Script that displays the following webpage output:</b>  <p>The user enters two numbers in respective text boxes. Write a JavaScript such that when user clicks "add", a message box displays sum of two entered numbers, if the user clicks on "sub". Message box displays subtraction of two numbers and on clicking "mul" the message box displays multiplication of two numbers.</p>	<b>Designing and calling function in onClick() - 1M</b>  <b>Writing function for add,sub,mul- 03M</b>	



**Ans**

```
<html>
<head>
<script>
function add()
{
    var num1, num2, r;
    //to accept 2 values and stored in variable num1 and num2
    num1 = parseInt(document.getElementById("firstnumber").value);
    num2 = parseInt(document.getElementById("secondnumber").value);
    r= num1 + num2;    alert(r);
}
function sub()
{
    var num1, num2, r;
    num1 = parseInt(document.getElementById("firstnumber").value);
    num2 = parseInt(document.getElementById("secondnumber").value);
```



```
        r = num1 - num2;
alert(r);
    }

    function mul()
    {
        var num1, num2, r;
        num1 = parseInt(document.getElementById("firstnumber").value);
num2 = parseInt(document.getElementById("secondnumber").value);    r
= num1 * num2;
        alert(r);
    }
</script>
</head>
<body>
<fieldset>
    <p>First Number: <input id="firstnumber"></p>
    <p>Second Number: <input id="secondnumber"></p>
//onClick() event to perform addition, subtraction and multiplication
    <button onclick="add()">Add</button>
    <button onclick="sub()">Sub</button>
    <button onclick="mul()">Mul</button>
</fieldset>
</body>
</html>
```



**Output:**

First Number:

Second Number:



b)	<b>Write a JavaScript that accents user's first name and domain name of Organization from user., The JavaScript then forms email address as &lt;firstname@domain&gt; name and displays the results in the browser window.</b>	<b>4 M</b>	





<b>Ans</b>	<pre>&lt;html&gt; &lt;head&gt;   &lt;script&gt;     //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; }   &lt;/script&gt; &lt;/head&gt; &lt;body&gt;   &lt;p&gt;First Name: &lt;input id="first"&gt;&lt;/p&gt;   &lt;p&gt;Domain Name: &lt;input id="domain"&gt;&lt;/p&gt;   &lt;button onclick="myemail()"&gt;create email id&lt;/button&gt;   &lt;br&gt; Email ID is   &lt;p id="email"&gt; &lt;/p&gt; &lt;/body&gt; &lt;/html&gt;</pre>	Accept values- 1M  Formation of email id-2M  Calling function in onClick()-1M
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**Output:**

First Name:

Domain Name:

Email ID is

mahak@zita.edu.in

c)	<b>Differentiate between substring() and substr() method of a string class. Give Suitable example of each.</b>	<b>4 M</b>
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<b>Ans</b>	<b>Parameters</b>	<b>substring()</b>	<b>substr()</b>	3 points-3M Example-1M
	Use	It is used to extract the specified substring within a string	It is used to extract a part of the string	
	Syntax	str.substring(start, end);	str.substr(start, len);	
	Parameters	Its parameters are the start and end position of the substring that we want to extract.	It takes parameters as starting index of the part which we want to extract and the length till which we want to extract the string part.	
	index	This method cannot handle negative indexes.	This method can handle negative indexes.	
	<p><b>Example:</b></p> <pre>&lt;script&gt; var a="Javascript"; document.write("Using substring()="+a.substring(2,6)); document.write("&lt;br&gt;Using substr()="+a.substr(2,6)); &lt;/script&gt;</pre> <p><b>Output:</b> Using substring()=vasc Using substr()=vascri</p>			
<b>d)</b>	<b>State what is a cookie? Explain its need. State characteristics of persistent cookies.</b>			<b>4 M</b>



<b>Ans</b>	<p><b>Cookie:</b> <b>Cookies</b> are small text files that websites use to store information on a user's computer or device. Cookies can be used for a variety of purposes, such as remembering a user's preferences, tracking their behavior on a website, and enabling personalized advertising.</p> <p>There are two main types of cookies: session cookies and persistent cookies.</p> <p><b>Need of Cookie:</b> Cookies are built specifically for web browsers to track, personalize and save information about each user's session. A “session” is the word used to define the amount of time you spend on a site. Cookies are created to identify you when you visit a new website.</p> <p><b>Characteristics of persistent cookies:</b></p> <ul style="list-style-type: none"><li>• Persistent cookies can be used to store information that needs to be accessed across multiple browsing sessions, such as login credentials and language preferences.</li><li>• Persistent cookies can be used to track a user's behavior on a website over time, which can be used to personalize the user's experience.</li><li>• Persistent cookies can be used to remember a user's preferences, such as their preferred layout or font size.</li></ul>	Definition-1M Need-1M Charactristics-2M
<b>4.</b>	<b>Attempt any <u>THREE</u> of the following:</b>	<b>12 M</b>
a)	<b>Write a JavaScript that accepts a string and searches for the pattern "MSBTE" in the given string using regular expressions. If the pattern is found, JavaScript will display that "Pattern is found" else display "Pattern is not found".</b>	<b>4 M</b>



<b>Ans</b>	<pre> &lt;html&gt; &lt;head&gt; &lt;title&gt;JavaScript RegExp exec Method&lt;/title&gt; &lt;/head&gt; &lt;body&gt; &lt;script type = "text/javascript"&gt;  var str= prompt("Enter a string");      var re = new RegExp( "MSBTE", "g" );     var result = re.exec(str);     if(result=="MSBTE")     {     document.write("pattern is found");     } else     {     document.write("pattern is not found");     } </pre>	Accept string-1M  Correct RegEx-2M  Condition checking-1M
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	<pre> &lt;/script&gt; &lt;/body&gt; &lt;/html&gt; </pre>	
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<b>b)</b>	<p><b>List and state various properties of a window object. Write a JavaScript that opens a new popup window with message WELCOME To SCRIPTING" when the page loads and a new popup window displaying message "FUN WITH SCRIPTING when the page unloads.</b></p>	<b>4 M</b>
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<b>Ans</b>	<p><b>Window Object Properties</b></p> <table border="1" data-bbox="235 1444 1339 1921"> <thead> <tr> <th>Property</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Document</td> <td>It returns the document object for the window (DOM).</td> </tr> <tr> <td>Frames</td> <td>It returns an array of all the frames including iframes in the current window.</td> </tr> <tr> <td>Closed</td> <td>It returns the Boolean value indicating whether a window has been closed or not.</td> </tr> <tr> <td>History</td> <td>It returns the history object for the window.</td> </tr> <tr> <td>innerHeight</td> <td>It sets or returns the inner height of a window's content area.</td> </tr> </tbody> </table>	Property	Description	Document	It returns the document object for the window (DOM).	Frames	It returns an array of all the frames including iframes in the current window.	Closed	It returns the Boolean value indicating whether a window has been closed or not.	History	It returns the history object for the window.	innerHeight	It sets or returns the inner height of a window's content area.	properties of a window object-1M  calling onload()-1M  calling onunload()-1M
Property	Description													
Document	It returns the document object for the window (DOM).													
Frames	It returns an array of all the frames including iframes in the current window.													
Closed	It returns the Boolean value indicating whether a window has been closed or not.													
History	It returns the history object for the window.													
innerHeight	It sets or returns the inner height of a window's content area.													



innerWidth	It sets or returns the inner width of a window's content area.
Length	It returns the number of frames in a window.
Location	It returns the location object for the window.
Name	It sets or returns the name of a window.
Navigator	It returns the navigator object for the window.
Opener	It returns a reference to the window that created the window.
outerHeight	It sets or returns the outer height of a window, including toolbars/scrollbars.
outerWidth	It sets or returns the outer width of a window, including toolbars/scrollbars.
Parent	It returns the parent window of the current window.
Screen	It returns the screen object for the window.
screenX	It returns the X coordinate of the window relative to the screen.
screenY	It returns the Y coordinate of the window relative to the screen.
Self	It returns the current window.
Status	It sets the text in the status bar of a window.
Top	It returns the topmost browser window that contains frames.

valid function  
definition-1M



**Code:**

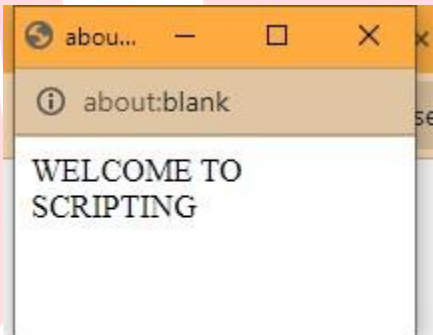
```
<html>
<body onload="openWin()" onunload = "myWindow.document.write("FUN WITH
SCRIPTING");">

    <script>
    var
myWindow;

        function openWin()
        {
            myWindow = window.open("", "myWindow", "width=200,height=100");
myWindow.document.write("<p>WELCOME TO SCRIPTING</p>");
        }

        function closeWin()
        {
            myWindow.close();
alert("Fun with SScripting");
        }
    </script>
</body>
</html>
```

**Output:**





c)	<p>Write an HTML script that displays names of different brands of Laptop and an image by default as :</p> <ul style="list-style-type: none"><li>• Lenovo</li><li>• HP</li><li>• DELL</li></ul> <div data-bbox="516 506 1057 684" style="border: 1px solid black; width: 333px; height: 85px; display: flex; align-items: center; justify-content: center;"><p>Image</p></div> <p>When the mouse moves over the specific brand name the script must display the image of respective Laptop in the adjacent box.</p>	4 M
Ans	<p><b>Code:</b></p> <pre>&lt;html&gt; &lt;head&gt;</pre>	Designing of form-1M Any relevant



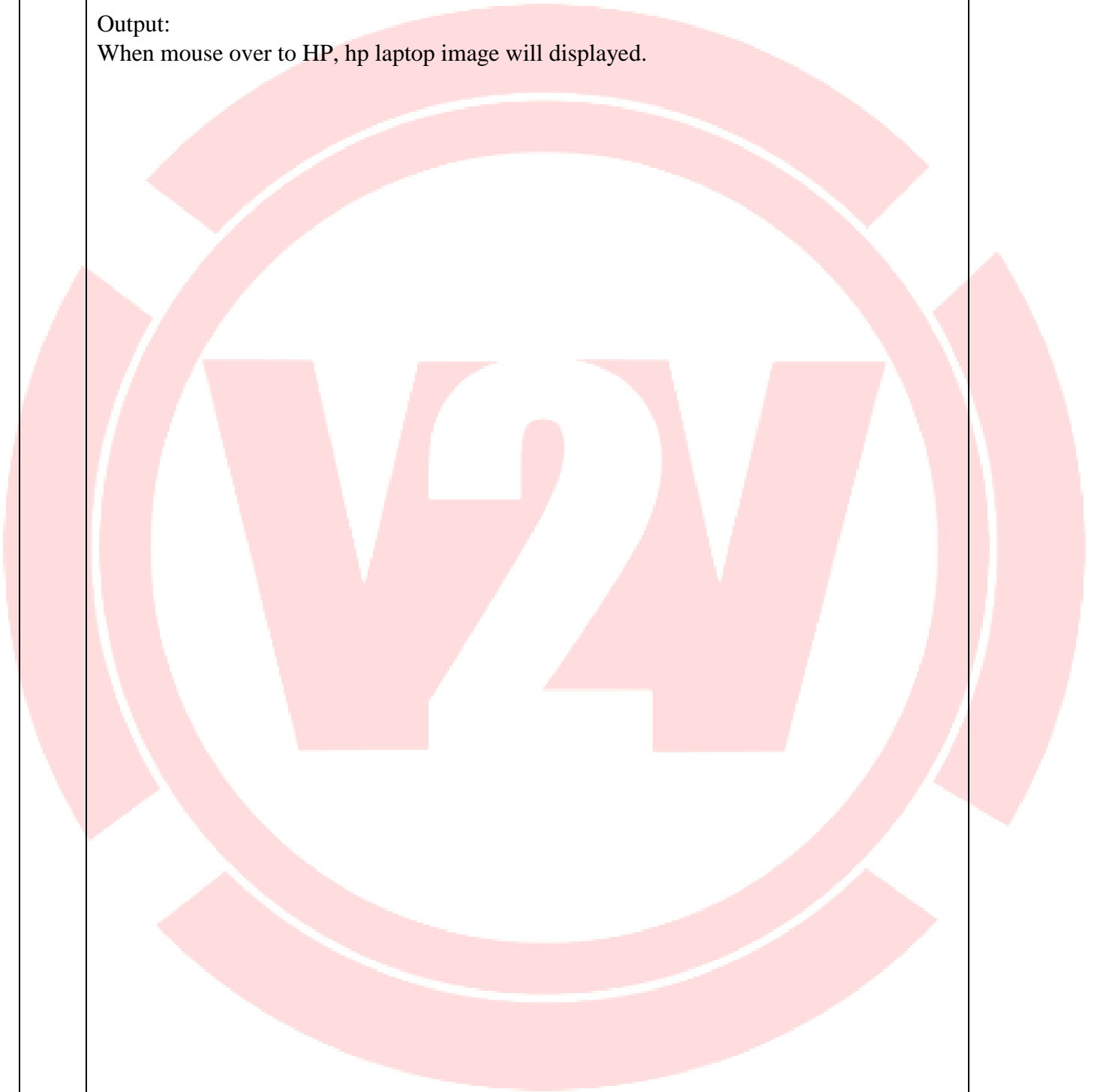


	<pre>&lt;title&gt; text rollovers&lt;/title&gt; &lt;script&gt; b=new Image; r=new Image; g=new Image; if(document.images) { b.src='vv.png'; r.src='hp.png'; g.src='dell.png'; } else { b.src=""; r.src=""; g.src=""; document.clr=""; }  &lt;/script&gt; &lt;/head&gt; &lt;body&gt; &lt;table border="0" width="100%"&gt; &lt;tbody&gt; &lt;tr valign="top"&gt;  &lt;td&gt;&lt;H2&gt;&lt;ul&gt;&lt;li&gt; &lt;a onmouseover="document.clr.src='vv.png'"&gt; &lt;b&gt;&lt;u&gt;Lenovo&lt;/u&gt;&lt;/b&gt;&lt;/a&gt;&lt;/li&gt; &lt;li&gt;&lt;a onmouseover="document.clr.src='hp.png'"&gt; &lt;b&gt;&lt;u&gt;HP&lt;/u&gt;&lt;/b&gt;&lt;/a&gt;&lt;/li&gt; &lt;li&gt;&lt;a onmouseover="document.clr.src='dell.png'"&gt; &lt;b&gt;&lt;u&gt;DELL&lt;/u&gt;&lt;/b&gt;&lt;/a&gt;&lt;/li&gt;&lt;/ul&gt; &lt;/H2&gt; &lt;/td&gt; &lt;td width="50%"&gt; &lt;a&gt;&lt;img height="200" src="vv.png" width=400" name="clr"&gt;&lt;/a&gt;&lt;/td&gt; &lt;/tr&gt; &lt;/tbody&gt; &lt;/table&gt; &lt;/body&gt;</pre>	logic-3M
--	---	----------



</html>

Output:  
When mouse over to HP, hp laptop image will displayed.





- Lenovo
- HP
- DELL



- Lenovo
- HP
- DELL



d)	Give syntax of and explain the use of SetTimeout() function with the help of suitable example.	4 M
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<p><b>Ans</b></p>	<p><b><u>Use of setTimeout()</u></b></p> <p>The setTimeout() method executes a block of code after the specified time. The method executes the code only once.</p> <p><b><u>The commonly used syntax of JavaScript setTimeout is:</u></b></p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><b>setTimeout(function, milliseconds);</b></p> </div> <p>Its parameters are:</p> <ul style="list-style-type: none"> <li>• function - a function containing a block of code</li> <li>• milliseconds - the time after which the function is executed</li> </ul> <p>The setTimeout() method returns an intervalID, which is a positive integer.</p> <p><b><u>Example: Display a Text Once After 3 Second</u></b></p> <pre>&lt;script&gt; function greet() {   document.write('Hello world'); } setTimeout(greet, 3000); document.write("This message is shown first"); &lt;/script&gt;</pre>	<p>Use of SetTimeOut()- 1M</p> <p>Syntax-1M</p> <p>Example-2M</p>
	<p>In the above program, the setTimeout() method calls the greet() function after 3000 milliseconds (3 second). Hence, the program displays the text Hello world only once after 3 seconds.</p>	
<p>e)</p>	<p><b>State the use of hiding the JavaScript. Explain the steps needed to accomplish it and describe the process.</b></p>	<p><b>4 M</b></p>



<b>Ans</b>	<p>You can hide your JavaScript from a visitor by storing it in an external file on your web server. The external file should have the .js file extension. The browser then calls the external file whenever the browser encounters a JavaScript element in the web page. If you look at the source code for the web page, you'll see reference to the external .js file, but you won't see the source code for the JavaScript.</p> <p><b><u>webpage.html</u></b></p> <pre>&lt;html&gt; &lt;head&gt; &lt;script src="mycode.js" language="javascript" type="text/javascript"&gt; &lt;/script&gt; &lt;body&gt; &lt;h3&gt; Right Click on screen, Context Menu is disabled&lt;/h3&gt; &lt;/body&gt; &lt;/html&gt;</pre> <p><b><u>mycode.js</u></b></p> <pre>window.onload=function() { document.addEventListener("contextmenu", function(e) { e.preventDefault(); }, false); }</pre>	Use-2M Steps with code-2M
5.	<b>Attempt any <u>TWO</u> of the following:</b>	<b>12 M</b>
a)	<b>Write a JavaScript that demonstrates use of floating menu alongwith respective HTML script.</b>	<b>6 M</b>



<b>Ans</b>	<b>Code:</b> <html> <title>Example</title> <style> body { background-image: url('/pix/samples/bg1.gif'); } main { margin-bottom: 200%; } .floating-menu {	Any relevant logic or example-6M
------------	---	--



```
font-family: sans-serif;
background: yellowgreen;
padding: 5px;;
width: 130px; z-
index: 100; position:
fixed;
}
```

```
.floating-menu a,
.floating-menu h3 {
font-size: 0.9em;
display: block;
margin: 0 0.5em;
color: white;
}
```

```
</style>
```

```
<main>
```

```
<p>Scroll down and watch the menu remain fixed in the same position, as though it was floating.</p>
```

```
<nav class="floating-menu">
```

```
<h3>Floating Menu</h3>
```

```
<a href="c_sub.txt">C</a>
```

```
<a href="C++_sub.txt">C++</a>
```

```
<a href="java_sub.txt">Java</a>
```

```
<a href="python_sub.txt">Python</a>
```

```
</nav>
```

```
</main>
```

### Output:



Apps Gmail YouTube Maps

Scroll down and watch the menu remain fixed in the same position, as though it was floating.

Floating Menu

C

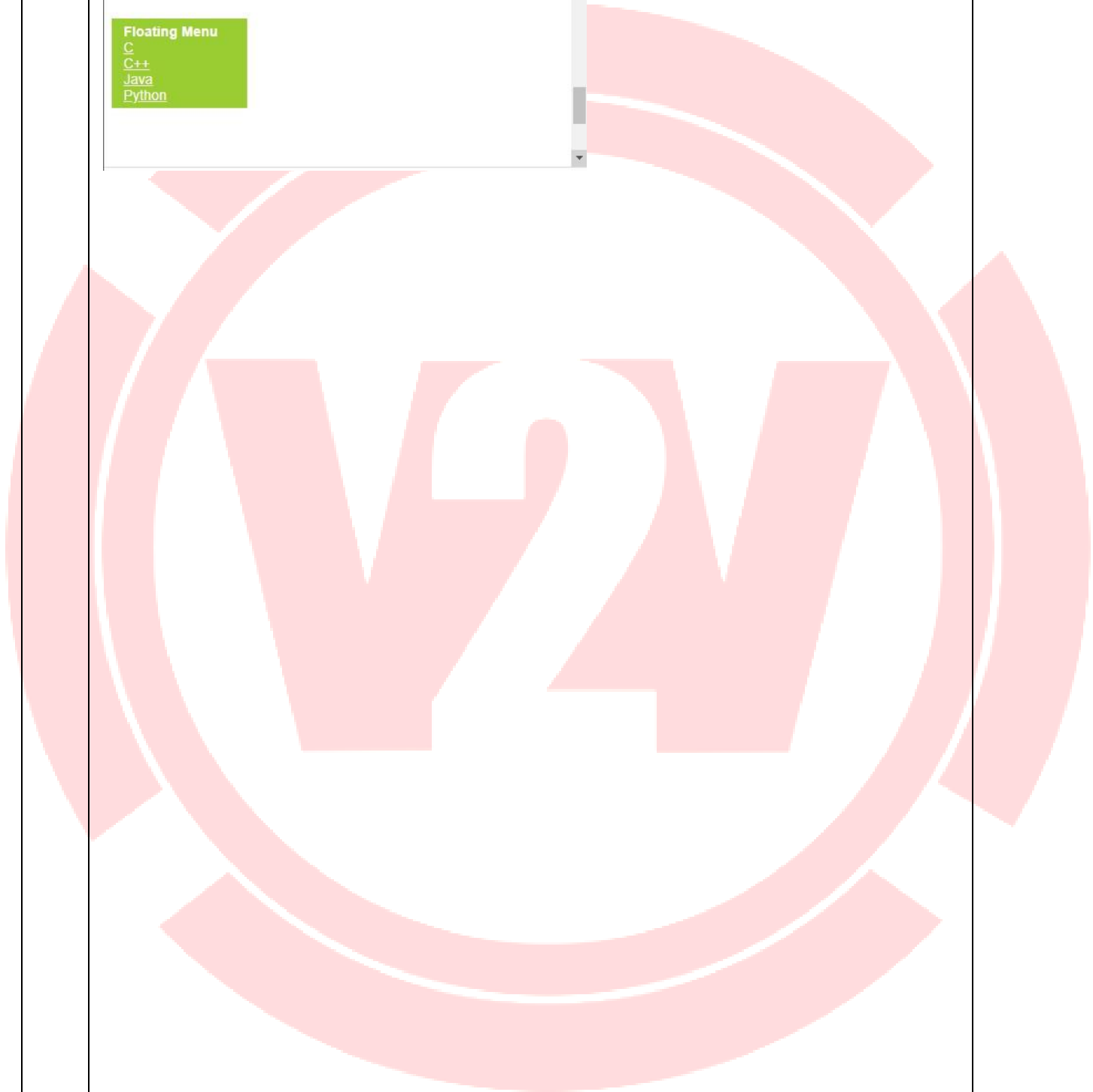
C++

Java

Python



Floating Menu  
C  
C++  
Java  
Python







	<p><b>b) Form regular expressions for following :</b></p>	<p><b>6 M</b></p>
	<p><b>i) Validation of email address.</b></p> <p><b>ii) Validation of adhaar card. Format is dddd - dddd - dddd</b></p> <p><b>(iii) Validation of phone number. Format is (ddd) -(dddddddd)</b></p>	
<p><b>Ans</b></p>	<p><b>i) Regular expression for Validation of email address:</b></p> <pre>var validRegex = /^[a-zA-Z0-9.!#\$%&amp;'*/+=?^_`{ }~-]+@[a-zA-Z0-9-]+(?:\.[a-zA-Z0-9-]+)*\$/;</pre> <p><b>ii) Validation of adhaar card Format is dddd - dddd - dddd</b></p> <p>Regular expression for Validation of adhaar card  <code> /^[2-9]{1}[0-9]{3}\s[0-9]{4}\s[0-9]{4}\$/gm</code></p> <p><b>iii) Validation of phone number. Format is (ddd) -(dddddddd)</b></p> <p>Regular expression for Validation of phone number:</p> <pre>var re = /^[+]?[(]?[0-9]{3}[D]?[ -\s\.]?[0-9]{3}[-\s\.]?[0-9]{4,6}\$/im;s</pre>	<p>Any valid regex for emailed-2M</p> <p>Any valid regex for adhaar card-2M</p> <p>Any valid regex for phone no-2M</p>



c)

6 M

(c) Write HTML and respective JavaScript such that

(i) Webpage displays three checkboxes as :

SELECT BEVERAGE :	<input type="checkbox"/>	TEA
	<input type="checkbox"/>	COFFEE
	<input type="checkbox"/>	SOFT DRINK

(ii) When a beverage is selected a dropdown list with options as below appears on page :

(a) If "TEA" option is checked dropdown list contains

Green tea
Milk tea
Black tea

(b) If "COFFEE" option is selected dropdown list contains.

Capaccino
Latte
Expression

(c) If "SOFT DRINK" option is selected dropdown list contains

MAAZA
SPRITE
COCA-COLA



<b>Ans</b>	<p>Code:</p> <pre>&lt;html&gt; &lt;body&gt; &lt;html&gt;      &lt;script type="text/javascript"&gt;     function modifyList(x)     {         with(document.forms.myform)         {             if(x ==1)             {                 optionList[0].text="Green Tea";                 optionList[0].value=1;                 optionList[1].text="Milk Tea ";                 optionList[1].value=2;                 optionList[2].text="Black Tea";                 optionList[2].value=3;             }              if(x ==2)             {                 optionList[0].text="Capaccino";                 optionList[0].value=1;             }         }     }     &lt;/script&gt; &lt;/body&gt; &lt;/html&gt;</pre>	Designing of form-2M Any relevant script-4M
------------	---	--



```
optionList[1].text="Latte";
optionList[1].value=2;
optionList[2].text="Expression";
optionList[2].value=3;
}
if(x ==3)
{
optionList[0].text="MAAZA";
optionList[0].value=1;
optionList[1].text="SPRITE";
optionList[1].value=2;
optionList[2].text="COKA-COLA";
optionList[2].value=3;
}
}
}

</script>
</head>
<body>
<form name="myform" action=" " method="post">
<table><tr><td>
Select Beverage: </td><td>
<input type="checkbox" name="grp1" value=1
onclick="modifyList(this.value)"> TEA

<input type="checkbox" name="grp1" value=2 onclick="modifyList(this
COFFEE
<input type="checkbox" name="grp1" value=3 onclick="modifyList(this
SOFT DRINK

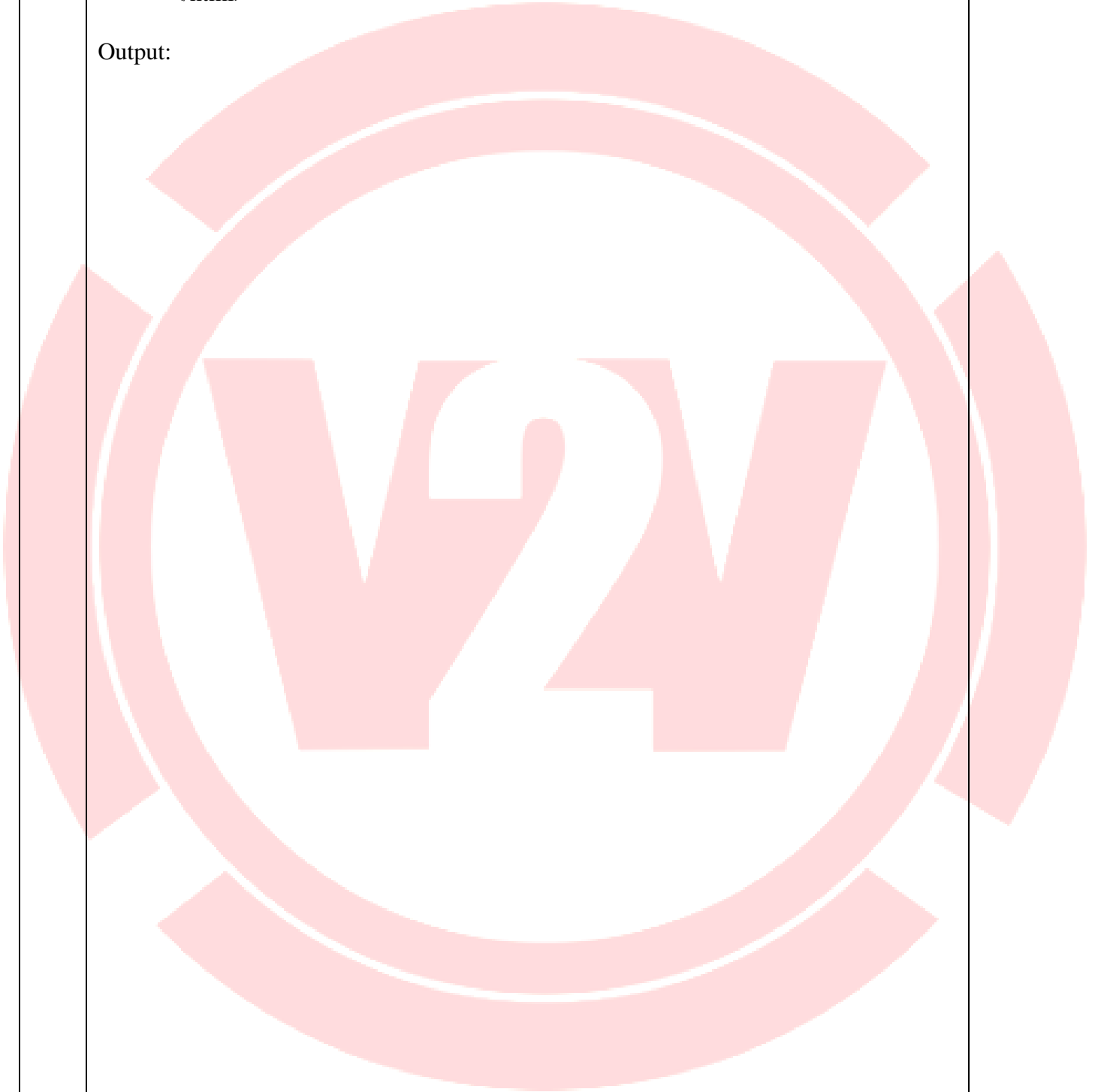
</td></tr></table>
<select name="optionList" size="3">
<option value=1>Kiwi
<option value=1>Pine-Apple
<option value=1>Apple
</tr> </table>
</select>
</form>

checked="true"
```



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

Output:





Select Beverage:  TEA  
 COFFEE  
 SOFT DRINK

Capaccino ▲  
Latte  
Expression ▼

6. Attempt any **TWO** of the following: **12 M**

a) List and explain any six form events. **6 M**

**Ans**

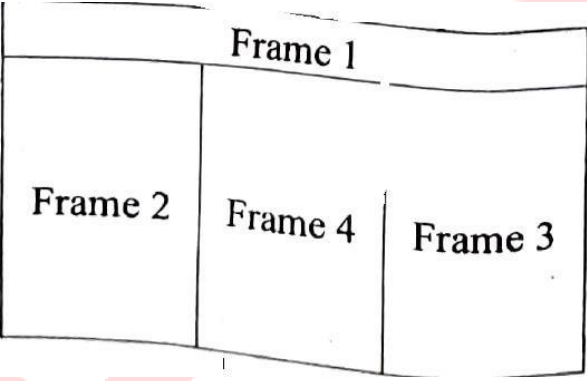
Event Handler	Description
onfocus	When the user focuses on an element
onsubmit	When the user submits the form
onblur	When the focus is away from a form element (The onblur event occurs when an object loses focus.)
onchange	When the user modifies or changes the value of a form element
keydown	The event occurs when the user is pressing a key
keypress	The event occurs when the user presses a key
keyup	The event occurs when the user releases a key
onclick	Fires on a mouse click on the element
ondblclick	Fires on a mouse double-click on the element
onmousedown	Fires when a mouse button is pressed down on an element
onmousemove	Fires when the mouse pointer is moving while it is over an element
onmouseout	Fires when the mouse pointer moves out of an element
onmouseover	Fires when the mouse pointer moves over an element
onmouseup	Fires when a mouse button is released over an element
onwheel	Fires when the mouse wheel rolls up or down over an element
oncontextmenu	oncontextmenu event occurs when the user right-clicks on an element to open the context menu.

One event with explanation- 1M each



<b>b)</b>	<b>Write a JavaScript that sets a crawling status bar message to the webpage. Message is "Welcome to the Mystic World of JavaScript". The message must start crawling when the webpage gets loaded.</b>	<b>6 M</b>
<b>Ans</b>	<pre>&lt;html&gt; &lt;head&gt; &lt;title&gt;Scrolling Text&lt;/title&gt; &lt;script language="JavaScript"&gt; var scrollPos = 0; // initial position to start status bar var maxScroll = 100; // maximum allowed position</pre>	Any relevant script-6M
	<pre>var blanks = ""; function scrollText(text, milliseconds) { window.setInterval("displayText(""+text+"")", milliseconds); } function displayText(text) { window.defaultStatus = blanks + text; ++scrollPos; blanks += " "; if(scrollPos &gt; maxScroll) { scrollPos = 0; blanks = ""; } } &lt;/script&gt; &lt;/head&gt; &lt;body onload="scrollText('Welcome to the Mystic World of JavaScript'.', 300)"&gt; &lt;p&gt;Watch the text scroll at the bottom of this window!&lt;/p&gt; &lt;/body&gt; &lt;/html&gt;</pre>	

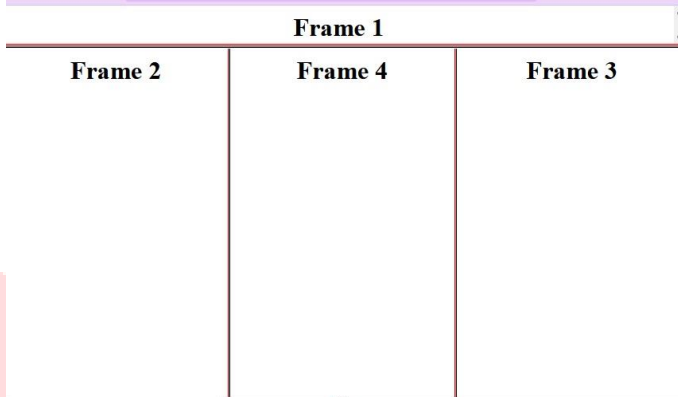


c)	<p><b>i) Design frameset tag for representing following layout:</b></p>  <p><b>ii) List any three properties of regular expression objects and state their use.</b></p>	<b>6 M</b>
<b>Ans</b>	<p><b>i)</b> Code:</p> <pre>&lt;html&gt; &lt;head&gt; &lt;title&gt;Create a Frame&lt;/title&gt; &lt;/head&gt; &lt;frameset rows="10%,*" border="5" frameborder="1" bordercolor="red" noresize&gt; &lt;frame src="frame1.html"&gt; &lt;frameset cols="33%,33%,*" border="3"&gt; &lt;frame src="frame2.html"&gt; &lt;frame src="frame4.html"&gt;</pre>	<p>i) correct html code-3M</p> <p>ii) 3 properties with use-3M each</p>





```
<frame src="frame3.html">  
</frameset>  
</frameset>  
</html>
```



ii)

property	Property & Description
constructor	Specifies the function that creates an object's prototype.
global	Specifies if the "g" modifier is set.
ignoreCase	Specifies if the "i" modifier is set.
lastIndex	The index at which to start the next match.
multiline	Specifies if the "m" modifier is set.
source	The text of the pattern.

**Example:**

```
<html>  
<head>  
  <title>JavaScript RegExp ignoreCase Property</title>  
</head>
```



```
<body>  
<script type = "text/javascript">  
  var re = new RegExp( "string" );  
  
  if ( re.ignoreCase )  
{
```





```
document.write("Test1-ignoreCase property is set");
} else
{
document.write("Test1-ignoreCase property is not set");
}

re = new RegExp( "string", "i" );

if ( re.ignoreCase )
{
document.write("<br/>Test2-ignoreCase property is set");
} else
{
document.write("<br/>Test2-ignoreCase property is not set");
}
</script>
</body>
</html>
```