

**Minor: I**

**Semester: VI**

**Course: Web Technologies**

**Course Code: 08ISC604**

**Date & Time: 15/03/2011 (1:00 Pm – 2:15 Pm)**

**Marks: 40**

**Answer any TWO full questions. Assumptions made need to be clearly indicated.**

**1. a) With a neat diagram, explain the working of world wide web. (5M)**

**1. b) Write an HTML document with JavaScript that collects the following information from the user: last name, first name, middle initial, age (restricted to be greater than 18), and weight (restricted to the range of 60 – 80). You must have event handlers for the form elements that collect this information that check the input data for correctness. Message in alert windows must be produced when errors are detected. (10M)**

**1. c) Write a Javascript expression/code/function to generate the following: (5M)**

- (i) Randomize the roll of a single six-sided die.
- (ii) Check if a string is a palindrome.
- (iii) Count number of words in a paragraph.

**2. a) Justify that, Javascript is a loosely typed language. What makes it the most popular scripting language on the internet? (5M)**

**2. b) Write an XHTML document to Create a web page with a link at the top of it that when clicked**

**will jump all the way to the bottom of the web page. At the bottom of the web page there should be a link to jump back to the top of the web page. (6M)**

**2.c) Write an HTML document with Javascript to explain browser objects and location objects. (9M)**

**3. a) Write appropriate answers for the following HTML concepts:**

- (i) If a FRAMESET tag specified its rows as 1\*, 400, 2\*, How many horizontal frames would the frameset have and what height would each be? (4M)
- (ii) How would you merge cells in a table? (2M)
- (iii) HTML has two commands which are used to apply formatting to elements within the page. Compare and contrast the use of <div> and <span>. (4M)

**3. b) Write an HTML document with JavaScript code which must have a paragraph of at least 10 lines of text that describes you. This paragraph must be centered on the page and have space for 20 characters per line only. An image has to be superimposed over the northwest (upper-left) corner of the text as a nested element. Add four buttons to the document and label them as Northwest, Northeast, Southwest, and Southeast. When they're pressed, the buttons must move your image to the specified corner of the text. (10M)**



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Scheme of Evaluation

1.a) Working of Web: Diagram – 2M, Explanation – 3M

1.b) *Using form to collect last name, first name, middle initial, age, weight – 2M*  
*Event handling for form elements – 2M*  
*Data Validation – 2M*  
*Alert windows when errors encountered – 2M*  
*O/P in appropriate format – 2M*

1.c)

<pre>(i) var Num = Math.floor(Math.random()*6) + 1</pre> <p style="text-align: right;"><i>1M</i></p>	<pre>(iii) function countWords() { document.form1.wordcount.value = document.form1.inputString.value. split(' ').length; }</pre> <p style="text-align: center;"><b>OR</b></p> <p style="text-align: right;"><i>2M</i></p>
<pre>(ii) function isPalindrome(word) // Given : word is a string // Returns: true if word is a palindrome, else false { var i; for (i = 0; i &lt; word.length; i++) { if (word.charAt(i) != word.charAt(word.length-1-i)) { return false; } } return true; }</pre> <p style="text-align: right;"><i>2M</i></p>	<pre>function Draft(text1,text2) { var v1=text1.value; var v = 0; v2=v1.replace(/\s/g, ' '); v2=v2.split(' '); for (i=0; i&lt;v2.length; i++) {if (v2[i].length &gt; 0) v++;} text2.value=v; }</pre> <p style="text-align: right;"><i>2M</i></p>

2.a) Justification – 3M, most popular [appropriate solution] – 2M

2.b) *<? xvd*  

```
<html> <body>
<a name="top">The top of the page</a>
<br /><br />
<a href="#bottom">Jump to the bottom of the page</a>
<p>Some text</p>
<!--Some more text paragraphs -->
<a href="#top">Jump to the top of the page</a>
<br /><br />
<a name="bottom">The bottom of the page</a>
</body> </html>
```

*6M*

2.c) Program with explanation of Browser objects: (5M)

navigator.appName, navigator.appVersion, navigator.appCodeName, navigator.userAgent, navigator.plugins;

Program with explanation of Location objects: (4M)

window.location.assign(url), window.location.reload(), window.location.replace(url);

3.a)

(i) It would however, be split into three horizontal sections. The middle section will be 400 pixels wide. Of the remaining space, one third will be taken by the top frame with 2 thirds being taken by the bottom frame (1\* and 2\*).  $\uparrow (1+1+1) = 4M$

(ii) merge table cells by using the "colspan" and "rowspan" attributes along with the <td> tag.  $(1+1)M$

(iii) Some of the differences between <span> and <div> are:

- \* <span> tag is an *inline* element and <div> tag is a *block* element.  $4 * 1 \text{ each} = 4M$
- \* <span> delimits text, it doesn't cause a line break where as <div> does.
- \* Unlike <div>, <span> does not have an ALIGN attribute.
- \* A <span> tag allows you to alter the presentation style within the current hierarchical block, whereas the <div> tag starts a new block for you.
- \* example for <span> and <div>

3.b)

Page Coding following

- Centered paragraph on page having space 20 chars per line - 2M
- Image over northwest corner of text - 1M
- Four buttons which when pressed, must move image to specific corner (NW, NE, SW, SE) } - 6M
- Appropriate styling - 1M