RAJATRATA UNIVERSITY OF SRI LANKA

FACULTY OF APPLIED SCIENCES, MIHINTALE

B.Sc.(General) Degree in Information Communication Technology

Second Year-Semester I Examination –April/May 2016

ICT 2404-Multimedia and Web Technology

Answer 5 Questions Only   **Time 3 Hours**

1. Answer the following questions using HTML (your answer must be a valid HTML 5 document).

   i.

      a. Write HTML code to create the following web page (assume name is q1.html)

                                                   (4 Marks)

Web Site Outline

- Home page
- Links page
    - I Links to search engines
    - II Links to information sites
    - III Links to "fun" sites
- Feedback page

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      b. Write HTML code to add the following content as it is to the web page.

                                                   (4 Marks)

```
Introduction to HTML tags
  head
 table
 body
© RUSL
```

   ii.   Write HTML code to add **iframe** which is used to load the q1.html page. The width and height of the frame are 200px,125px respectively.   (6Marks)

Student Details

Please fill the form in block letters

Name:

Age :

Date registered :

Sex: Male   Female

Submit   Reset

iii.   Write Html code to add the following form.   (6 Marks)

Student Details

Please fill the form in block letters

Name:

Age :

Date registered : mm/dd/yyyy

Sex: Male   Female

Submit   Reset

2.

    i.   Briefly describe the use of Style sheet.   (2 Marks)

    ii.   In relation to Cascading Style Sheets (CSS), briefly state what each of the
following terms refer to:

        Selector

        Property

                                            (2 Marks)
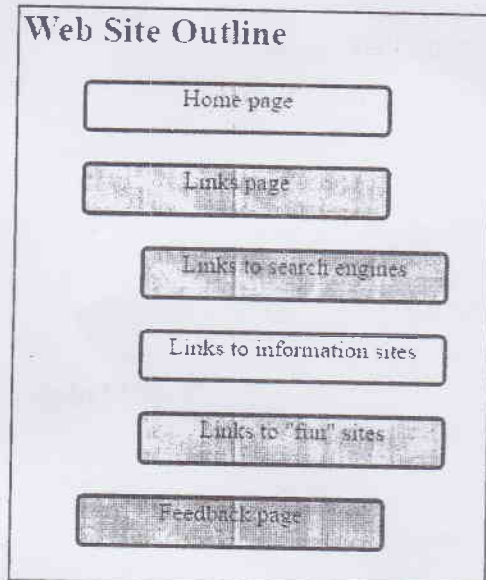
    iii.   Consider the following CSS code:

```
<style type="text/css">
p {
        position:relative;
        top:200px;
        left:300px;
```

```
        border:4px groove #333333;
        margin: 20px 50px;
        font-family: "Times New Roman", Georgia,
        Serif;
        font-size: 26px;
        text-indent: 250px;
    }
p.small {
        margin: 0px 100px;
        font-family: "Courier New", Courier,
        monospace;
        font-size: 50%;
        text-indent: 0px;

</style>
```

a. Write HTML markup to display how each of the styles might be used.

(3 Marks)

b. Sketch how the HTML you have written in above (a) might be rendered in a browser.

(3 Marks)

iv. Add external style sheet with appropriate CSS to above Q1.i a) to change the above page appearance as follows.

(Use box model with text aligning, rounded corner , background color, list style type and positioning properties. You are free to use your own property values . Write link tag and style rues only).

(10 Marks)

Web Site Outline

- Home page
- Links page
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3.

i. Identify errors in the following JavaScript code. (preceding numbers are for your reference only).

```
1.      var arr1=[]
2.      for(i=1,i<5,i)
3.      {
4.      arr1[i]=i
5.      document.write(arr[i])

6.      }
```

(3 Marks)

ii. Write a JavaScript function to print the sum of all integers lie between given two numbers . The first number and second number will pass as function parameters (second number must greater than first number).
Example
function(2,5) returns value 14

(7 Marks)

iii. Write JavaScript Function to check whether the entered age in question (1.ii) form age element is lie between 18 and 40.

(10 Marks)

4.

i. What will be the output of the following PHP codes:

a.

```
$salary = array
 {
        "sunil" => 5000,
        "gamini" => 4000,
        "nimal" => 5500
}
print_r($salary);
```

(2 Marks)

b.

```
<?php

$info = "sunil.silva@ac.lk";
$user = strpos("$info", ".");
 $name=substr($info,0,$user);
```

```
print $name;
?>
```

(2 Marks)

ii. What are PHP cookies. Explain with a simple example   (4 Marks)

iii. Assume the details submitted in (1.ii) form are stored in a Database called "STUDENT" and it has only single table called "stud_dat".

     a. Write PHP code to connect to the database.   (2 Marks)

     b. Write complete code to display all the information stored in a table

           (5 Marks)

     c. Write code to display details of students whose age is greater than 25 as a level 2 header text.   (5 Marks)

5.

i. Explain the role of a DTD and Schema in relation to an XML document.

           (2 Marks)

ii. Write external DTD and XML Schema definitions according to the following details.

- The root element is "Student_Info".
- As the content for "Student_Info," "Student" occurs 0 or more times.
- As content of "Student," "Name," "Department," "Telephone," and "Email" elements occur once in respective order.
- "Name," "Department," "Telephone," and "Email" content are text strings.
- "Student" has an attribute called "Student_Number".
- "Student_Number" content must be an integer.

           (10 Marks)

iii. Write **valid** XML document according to the given details.   (5 Marks)

iv. Compare and contrast the *DTD* and an *XML* schema using above example. State the benefits of using each.   (3 Marks)

6.

     i. What images ae suitable to be represented as GIF and JPEG? Do they usually use lossless or lossy compression?   (4 Marks)

     ii. What is the CMYK colour mode? Give an application in which this colour model is mostly used and explain the reasons.   (4 Marks)

     iii. What is meant by the terms *Multimedia* and *Hypermedia*? Distinguish between these two concepts.   (6 Marks)

iv. What is the distinction between lossy and lossless data compression?
     Give one example of a lossy and lossless compression algorithm.

(6 Marks)