

University of Ruhuna - Faculty of Technology

Bachelor of Information & Communication Technology
Level 1 (Semester 1) Examination - October 2018

Web Technologies (Theory) - ICT1143

Time Allowed: 2 hours

Answer all four (4) questions

1.

a.

- i. Expand and briefly explain the abbreviations LAN and WAN.
- ii. Briefly explain the use of 'ping' command in windows command prompt.
- iii. Describe the purpose of 'Web Client' software and give an example for 'Web Client'.

b.

- i. HTTP is a communication protocol used by the World Wide Web. List two functionalities of HTTP.
- ii. Fill the following table.

Symbol	Character entity reference
&	
"	
©	
>	

c.

- i. Draw the output frame structure of the following html code (Mark the heights and widths of the frames as percentages).

```
<html>
  <frameset cols="25%,*,50%">
    <frame src="a.htm">
    <frame src="b.htm">
  <frameset rows="60%,*">
    <frame src="c.htm">
    <frame src="a.htm">
  </frameset>
</frameset>
</html>
```

ii. Write the suitable html code to output the screen given in Figure 1.

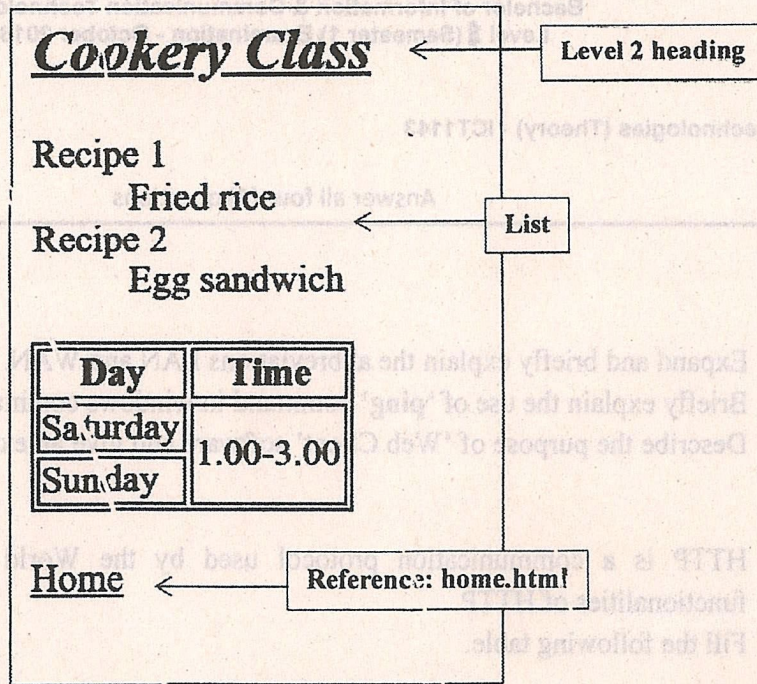


Figure 1

Note: Title of the web page – “Cook with us”

2.

- a.
 - i. List three drawbacks of meta refresh attribute.
 - ii. List three advantages of using Cascade Style Sheets (CSS).
 - iii. Briefly explain the ‘group selector’ in CSS using an example.
- b.
 - i. State one usage of a client pull document.
 - ii. Write down the appropriate CSS code line using inline style for the following requirements.

Note: Write only the relevant code line for the most appropriate HTML element

No.	Requirement
1	Add book.jpg as the background image. The background image should not scroll with the rest of the page
2	Underlined, bold and centered paragraph text
3	Level 2 heading with the blue color background

iii. Write code lines for the followings.

1. Link an external CSS file called 'myStyle.css'.
2. Add the author name "J.K.Peter" into the web page.
3. Create a form with the 'text/plain' encoding type and send the form data into first.php file using 'post' method.
4. Add the image "library.jpg" as a foreground image with the alternative text "Book shelves".

c.

i. Write a suitable html code to get the output given in Figure 2.

User Name:

Password:

Comments

Login turn First Logged before

Rows: 4
Columns: 20

Figure 2

ii. Draw the expected output of the following html code.

```
<html>
  <body>
    <table border = "1">
      <caption>Price List</caption>
      <tr>
        <th rowspan = "2">Food Items</th>
        <th colspan = "2">Details<br>Date:20/10/2018</th>
      </tr>
      <tr>
        <th>Quantity</th>
        <th>Unit Price</th>
      </tr>
      <tr>
        <th>Fish bun</th>
        <td>50</td>
        <td>30</td>
      </tr>
      <tr>
        <th>Egg bun</th>
        <td>10</td>
        <td>20</td>
      </tr>
    </table>
  </body>
</html>
```

3.

a.

- i. State two advantages of using JavaScript over using a server side scripting language.
- ii. Briefly explain the functionality of 'Break' and 'Continue' statements in JavaScript.
- iii. Draw the expected output of the following code.

```
<html>
<head>
<script>
  for (i=0;i<=15;i+=2) {
    if(i%3!=0){
      if(i==4){
        continue;
      }
      document.write("Num = " + i+"<br>");
    }
  }
</script>
</head>
</html>
```

b.

- i. Briefly explain the following HTML events. First one is an example given to you.

Event	Description
Onload	The browser has finished loading the page
Onclick	
Onmouseover	

- ii. Write an html code to find out the area of a square using following guidelines (Area of a square, which has the length of a base 'd' = $d \times d$).

- Create a function called **findMax()** to return the maximum number out of the two numbers which are passed as parameters of the function
- If the two parameters are equal, then return any of the parameter's value from **findMax()** function
- Create another function called **findArea()** to return the area of a square by using the value returned by the **findMax()** function (pass the maximum value to the **findMax()** function as a parameter)
- Display the answer on the browser by calling the **findMax()** function with the two parameters 6 and 4

Note: It is not allowed to use any built-in functions

c.

i. Write the html code to perform following functionalities using an interface as shown in Figure 3.

- You have to write a function named: **printCourse()**
- User can input values to the prompt box and press the 'OK' button
- When clicking the button,
 - If the input is IT, it must display "Information Technology" on the browser
 - If the input is ET, it must display "Engineering Technology" on the browser
 - If the input is any other, then the output must be "Error" on the browser
 - If the prompt box is empty, then display "Please enter a value" in a message box

Use **switch-case** to handle the user input

Note: Assume that the user is inserting only uppercase letters into the prompt box

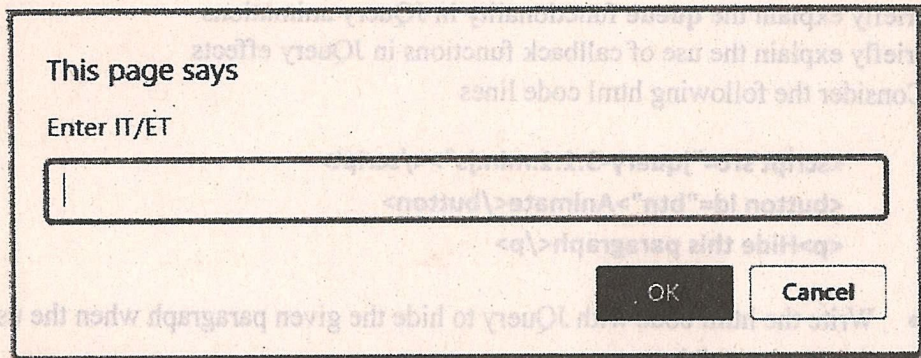


Figure 3

4.

a.

i. State **one** requirement of a valid XML document

ii. Write down whether the following XML codes are well formed or not. Justify your answer

1.

```
<xml? Version="1.0" ?>
<book>
  <name>HTML Basics</name>
  <author><id>J.W.Jane</author>BK002</id>
</book>
```

2.

```
<xml? Version="1.0" ?>
<book>
  <name>HTML Basics</name>
  <author/>
  <price></price>
</book>
```

3.

```
<xml? Version="1.0" ?>
<book>
  <name>HTML basics</name>
</book>
<book>
  <name>PHP Basics</name>
</book>
```

b.

- i. Briefly explain the **queue** functionality in JQuery animations
- ii. Briefly explain the use of callback functions in JQuery effects
- iii. Consider the following html code lines

```
<script src="jquery-3.1.1.min.js"></script>
<button id="btn">Animate</button>
<p>Hide this paragraph</p>
```

- Write the html code with JQuery to hide the given paragraph when the user clicks the "Animate" button.
- After hiding the paragraph, a message box should be displayed with the text "Paragraph is hidden"

Note: You must include the above code lines to appropriate places in your answer

c.

- i. Create a suitable Document Type Declaration (DTD) file to describe the following elements:

Root element: food

Root element has following child elements

- name – 1 instance,
- description – 1 instance;
- price – 1 instance (required attribute – currency),
- size - 0 or more instances

- ii. Consider the following XML code and write a code line to add an external stylesheet(**style1.css**) to display the following content in the browser

```
<?xml version="1.0" encoding="UTF-8"?>
-----
<food>
  <name>Chicken pizza</name>
  <description>With extra cheese</description>
  <price currency="LKR">Rs. 200.00</lecturer>
  <size>Small</students>
  <size>Medium</students>
</food>
```

- iii. Write the external CSS stylesheet to add the following styles to the XML file in part (b.ii.)
Background color = yellow
Name element left margin = 20 px
Description, price and size elements font size 20px and color should be blue

***** End*****