

UNIVERSITY OF RUHUNA
BACHELOR OF SCIENCE (BSC) (GENERAL) DEGREE LEVEL I SEMESTER I
EXAMINATION – June 2023

Course Unit: **COM113a (Internet Services and Web Development) -Repeat**
Duration: **1 Hour.**

*Answer **two (2)** questions only*

1.

- a. State whether the following statements are **true** or **false**.
 - i. The `<pre>` element in HTML is used to define preformatted text with fixed-width font and line breaks.
 - ii. The `hl` tag is used to define the horizontal line in HTML.
 - iii. The capability of browser software doesn't affect the downloading speed of a web page.
 - iv. Code lines in Cascading Style Sheets (CSS) are not case-sensitive.
 - v. The `<blockquote>` element in HTML is used to quote text from another source.
- b. Draw the expected output of the following HTML and CSS code shown in Figure 1. Note: You may indicate grey color background by shading with a pencil.

```
1  <!DOCTYPE html>
2  <html>
3    <style>
4      div { background-color: white; }
5      div div { text-align: right; padding-right: 4em; background-color: gray; }
6      #b { border: 2px dashed black; }
7      .c { text-decoration: underline; }
8    </style>
9    <body>
10
11      <div id="b">
12        <div>Beverages</div>
13        <ol>
14          <li>Coffee</li>
15          <li>Tea</li>
16          <li>Milk</li>
17        </ol>
18      </div>
19
20      <div class="c">
21        <span>Offers</span>
22      </div>
23    </body>
24  </html>
```

Figure 1

- c.
- Compare *relative URL* and *absolute URL* giving their main difference?
 - Briefly explain the difference between the “span” tag and the “div” tag in HTML?
 - “HTML form validation can be done using HTML itself without client side scripts server side scripts”, do you agree with this statement? Justify your answer with examples.
- d. The “ABC” is a Magazine in Sri Lanka. The editors decided to do a survey to collect Readers information and planned to gather data using a web form as shown in *Figure 2*. Write HTML source code for the Web Form shown in *Figure 2*) Note: Address field should be lengthy enough to enter an address.

User Survey

Name

Address

Gender
Male ☐ Female ☐

You came to know about our Magazine from:
Friend ☐ Newspaper ☐ TV/Radio ☐ Others ☐

Figure 2

2.

- a. Fill in each blank using the most suitable word/phrase from the below given list.

Background, <head>, bg-color, text align, transparent, <style>, <script>, align, ID, RGB, background-color, text_align, bg_color, ID selector, bg color, inline-block, class selector, Inline, text-align, color element.

- is the correct place to refer to an external style sheet in an HTML document.
- property is used to change the background colour of an element in CSS.
- attribute is used to name an element uniquely.
- The styles defined in an external style sheet can be overridden by the styles defined in
- The property is used to control the alignment of the text in an HTML element.

- b.
 - i. List **three** ways of inserting Cascading Style Sheets (CSS) into a web page.
 - ii. State the difference between “id” and “class” selectors of CSS.
 - iii. Briefly describe **two (2)** advantages of using group selectors in CSS.
 - iv. “It is important to test the webpage in different browsers” Do you agree with this statement? Explain your answer. -

- c.
 - i. Write an external cascading style sheet (CSS) script called *mystyles.css* to satisfy the following requirements in *Table 01*.

Element	Style Requirement
paragraph	Font style is ‘italic’, Top padding is 20px
header 1	Font size is 3em, set words to UPPERCASE letters
header 2	Font size is 3em
div	Width is 300px, background color is #b0e0e6
Entire web page	Set background image - URL: ‘image.jpg’

Table 01

- ii. You are provided with an HTML file called *index.html*. Write the relevant code line to connect your *mystyles.css* file created in c. (i) with the *index.html* file.

3.

- a. Fill in each blank using the most suitable word/phrase from the list given below. If you have one or more answers for one blank, use commas to separate each.

73, remove, a[0], prompt box, a[2], innerHtml, front(), 253, a[‘first’], 10, 25 “3”, confirm box, document.getElementById, push, newItem(), a[1], pop, a[-3], alert box, appendChild(), back()

- i. What would be the result of 2+5+ “3”?
- ii. The property is used to write the HTML code using JavaScript dynamically.
- iii. Themethod in JavaScript is used to add new elements to an array.
- iv. method takes the last element off of the given array and returns it.
- v. Given the array, var a = [20, 40, 60, 80, 100]is accessing the value 40.
- vi. is/are the popup box(s) available in JavaScript.

- b. Write a JavaScript program to achieve the following. Implement all the steps (i. to iv) with a single script. `<script>...</script>`.
- Create an array variable called "cities" assigning names of the four cities provided: Paris, Tokyo, New Delhi, and London.
 - Create another variable called "myCity" assigning the name of your city.
 - There are several built-in JavaScript methods to add a new element to an array. Using suitable method, add the name of your city stored in "myCity" variable into "cities" array.
 - Display all the cities in your 'cities' array on the web page, using a suitable loop.
- c. State whether the following statements are **true** or **false** considering the given code snippets. Note: Use the code snippet in Figure 3 to answer part i) and ii) questions and the code snippet in Figure 4 to answer part iii), iv) and v) questions.

```
function foo(x)
{
    var ct = 0;
    for (var i = 0; i < x.length; i++)
    {
        if (x[i] >= 70)
        {
            ct++;
        }
    }
    return ct;
}
```

Figure 3

- The function *foo* will never return a negative number.
- The function *foo* will never return the value 0.

```
var a = ["Red", "Orange", "Yellow", "Green", "Purple"];
var result = "";
for (var i = 0; i < a.length; i++)
{
    var A = a[i];
    var B = A.charAt(i);
    if (B == "e")
    {
        result += A;
    }
}
```

Figure 4

- The value of **A** is "Orange" at the second iteration of the loop.
- The value of **B** is 'e' at the second iteration of the loop.
- The value of the result is "Green" after the program has finished the execution.

- d.
- State **two** (2) advantages of using JavaScript language.
 - What will be the outputs of the following JavaScript code blocks?

	Code Block
i.	<code>document.write(10 === "10");</code>
ii.	<pre> var count=0; while(count<10) { count = count + 3; if(count % 2 == 0) { continue; } document.write("count="+count+"
"); } document.write("While loop terminated"); </pre>
iii.	<code>document.write(2+5+'3');</code>
iv.	<pre> var x = "Computer"; var y = "Science"; if(x.length > y.length) { document.write(x + ":" + x.length); } else { document.write(y + ":" + y.length); } </pre>
v.	<code>document.write("A" - "B" + 2);</code>

.....

End of the paper