



UNIVERSITY EXAMINATIONS

SECOND SEMESTER 2023/2024 ACADEMIC YEAR

**FIRST YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE (ICT) AND BACHELOR OF
COMPUTER SCIENCE**

BICT 124/COMP 123: WEB STSTEMS AND TECHNOLOGIES I

STREAM: R

TIME: 2 HRS

DAY: WEDNESDAY[8.30 - 10.30 A.M] DATE: 10/04/2024

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

INSTRUCTIONS: Section A is compulsory and has 30 marks.

Attempt any TWO questions from Section B. Each question has 20 marks.

SECTION A – 30 MARKS (ANSWER ALL QUESTIONS)

QUESTION ONE (30 MARKS)

- a) Write the HTML code required to generate the following HTML page **(4 Marks)**

Table Header		
Row 1 Col 1	Row 1 Merged Cols	
Row 2 Col 1	Row 2 Col 2	Row 2 Col 3
Row 3 Col 1 & 2		Row 3 Col 3

- b) Discuss three weaknesses of HTML as a tool for web application development **(6 Marks)**
- c) Write a suitable HTML list code that would output the nested list as it appears in figure below **(6 Marks)**

A Nested List

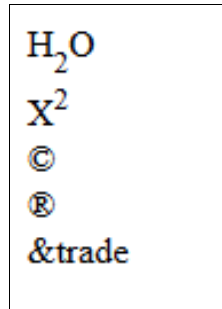
1. *Coffee*
2. *Tea*
 - *Black tea*
 - *Green tea*
3. *Milk*

- d) With the aid of examples describe the following as applied in HTML. **(4Marks)**
- i. Hyperlink
 - ii. Attributes
- e) Describe the advantages of using JavaScript on web pages **(4 Marks)**
- f) What is the scope of the variables in JavaScript. **(2 Marks)**
- g) Discuss the key differences between the alert and prompt dialog boxes in JavaScript. **(4 Marks)**

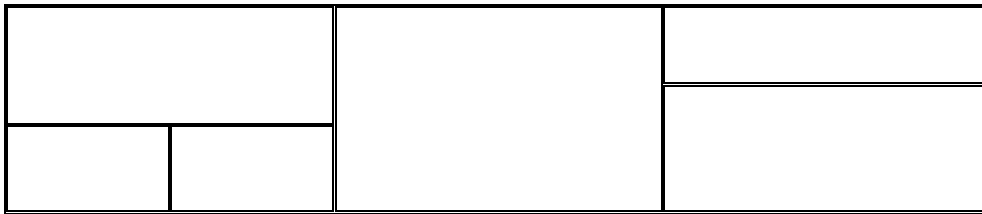
Section B – (40 MARKS) (Answer any two questions)

QUESTION TWO (20 MARKS)

- a) Write the HTML code required to display the following on a web browser **(5 Marks)**



- b) Explain the fundamental role of HTML and JavaScript in web development and Briefly compare and contrast their key features and functionalities. **(6 Marks)**
- c) CSS plays a good role to control image display. Write a code to illustrate the use of Image Border property. **(3 Marks)**
- d) Write HTML code to divide a page into frames as illustrated in the diagram below **(6 Marks)**



QUESTION THREE (20 MARKS)

- a) Write a syntax demonstrating the three types of CSS **(6 Marks)**
- b) Cascading style sheet (CSS) Is a style sheet language to describe the presentation semantics (the look and formatting) of a document written in a mark-up language. With its many advantages there are some noted limitations of the current capabilities of CSS. State and explain four limitations of CSS **(4 Marks)**
- c) Highlight four internet security vulnerabilities. **(4 Marks)**
- d) Write the JavaScript Functions required to perform the following functions in a web browser **(6 Marks)**
- Redirect to a new page
 - Print the current page

QUESTION FOUR (20 MARKS)

- a) Describe the differences between the use of POST and GET in form submission
(4 Marks)
- b) Explain each of the components found in the syntax while writing the following url
<https://www.ubah.org/html/brochure.pdf>
(4 Marks)
- c) Write down the HTML code required to display the following on a web browser.
(6 Marks)

First name

Last name

Gender
☐ Male
☐ Female

County
 ▼

Professional Courses
☐ CCNA
☐ MCSE
☐ CEH

- 6 Uniform resource locator (URL) refers to a web address which is uniquely identifies document over the internet. With the aid of example in each differentiate absolute from relative url stating specific part of each url.
(6 Marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the differences between the following terms as used in Web design (4 Marks)
- Web page vs Website
 - Scripting vs Markup language
- b) Discuss the importance of responsive design in modern web development, and explore the key principles and techniques of CSS media queries.
(5 Marks)
- c) With the growth of the internet, electronic mail services are rapidly replacing ordinary mail services. Describe the features of an E-mail service which make it more efficient than the ordinary mail service.
(5 Marks)
- d) CSS selector allow one to select and manipulate html element. With the aid of example discuss at least four CSS selectors.
(4 Marks)
- e) Explain four types of controls used in a form.
(2 Marks)