



# **GRETSA UNIVERSITY - THIKA**

## **UNIVERSITY EXAMINATIONS JANUARY-APRIL 2025 SEMESTER**

### **CERTIFICATE IN IT**

**COURSE CODE: CFIT 022**

**COURSE TITLE: FUNDAMENTALS OF WEB SYSTEMS**

**DATE: APRIL 2025**

**TIME: 2 HOURS**

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#### **INSTRUCTIONS TO CANDIDATES**

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **TWO** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

**CAUTION:** *All exam rooms are under CCTV surveillance during the examination period.*

## SECTION A: COMPULSORY

### Question One

- a) Explain the difference between the following:
- i. Attribute and element [2 marks]
  - ii. Web browser and wireframe [2 marks]
  - iii. `<em>` and `<i>` [2 marks]
  - iv. `<b>` and `<strong>` [2 marks]
- b) Discuss the following components of a web browser
- i. Client programs [3 marks]
  - ii. Interpreter [3 marks]
  - iii. Controller [3 marks]
- c) Discuss the anatomy of a webpage and include a sample diagram to illustrate different parts of a webpage [5 marks]
- d) Write a HTML program to display two paragraphs, each with a different heading [4 marks]
- e) Distinguish between static websites and dynamic websites [4 marks]

## SECTION B: ANSWER ANY TWO QUESTIONS

### Question Two

Create a HTML program to design a registration form for a website. The form should include the following fields:

- a) Full Name (text input) [1 mark]
- b) Email Address (email input) [3 marks]
- c) Password (password input) [3 marks]
- d) Gender (radio buttons for Male, Female) [3 marks]
- e) Country (radio buttons for at least three country options) [3 marks]
- f) Hobbies (checkboxes for options such as Reading, Sports, and Music) [3 marks]
- g) Submit and Reset buttons [4 marks]

### Question Three

- a) Write an HTML program to create a table that displays the following information about five students in a class: [10 marks]

Student ID, Name, Age, Grade, Email

The table should include:

- i. A header row with column names.
- ii. Proper border styling for table readability.
- iii. At least two rows with sample data for each student.
- iv. Column alignment for a clear and organized display.

- b) Evaluate the purpose of CSS in web development. In your answer, discuss:
- i. The advantages of using CSS for styling compared to inline styling within HTML tags. [2 marks]
  - ii. The difference between the three ways CSS can be applied to HTML documents [6 marks]
  - iii. How CSS enhances the user experience and accessibility of a website. [2 marks]

#### Question Four

- a) Discuss the key principles of effective web design, and discuss how poor design choices can negatively impact user experience and suggest best practices to avoid these issues. [8 marks]
- b) Identify three commonly used client-side scripting languages and three server-side scripting languages. For each, briefly describe their typical applications and strengths in web development. [6 marks]
- c) Create an HTML code snippet that displays a list of popular web browsers (Firefox, Chrome, and Opera) as an **ordered list**. [6 marks]

#### Question Five

- a) Compare and contrast cell padding and cell spacing in HTML tables. How does each affect the appearance and readability of table data? [6 marks]
- b) Explain the use of header tags <h1> through <h6> in HTML. Why is it important to structure headings properly on a web page? [8 marks]
- c) Write a HTML code snippet to create a link that takes the user to the website "https://www.example.com" when clicked. Make the link text display as "Visit Example." [6 marks]