



UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

**FIRST YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN COMPUTER SCIENCE, BSc
(ICT), BSc (STATISTICS) AND BEd (SCIENCE)**

COMP 113: INTRODUCTION TO COMPUTER PROGRAMMING

STREAM: R

TIME: 2 HRS

DAY: THURSDAY [11.30 – 13.30 P.M]

DATE: 05/02/2026

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

INSTRUCTIONS:**QUESTION ONE (30 MARKS)**

- a) Explain the difference between '++a' and 'a++' with examples. (3 Marks)
- b) Write a C program example to ADD two numbers (3 Marks)
- c) Explain briefly any five data-types found in c programming. (4 Marks)
- d) What are some reasons why C is considered an efficient programming language? (4 Marks)
- e) Explain the steps required to write, compile, and execute a C program. (4 Marks)
- f) Differentiate between high-level and low-level languages with reference to C. (2 Marks)
- g) Describe the structure of a basic C program using an example. (4 Marks)
- h) What is the role of the '**main()**' function in a C program? (2 Marks)
- i) Differentiate between signed and unsigned integers. (2 Marks)
- j) Explain the difference between 'float', 'double', and 'long double'. (2 Marks)

QUESTION TWO (20 MARKS)

- a) State two reasons as to why you would use C to program. (4 Marks)
- b) Write a C program to print 'Hello, World!'. (5 Marks)
- c) State **five** rules for naming variables C language. (5 Marks)
- d) Define the following terms as used in computer programming (6 Marks)
 - i. Pseudo code
 - ii. Algorithm
 - iii. Variable
 - iv. Constant
 - v. Program
 - vi. Assembler

QUESTION THREE (20 MARKS)

- a) Explain the difference between 'while', 'do-while', and 'for' loops. (4 Marks)
- b) Explain the difference between a class and an object in C. (4 Marks)
- c) Write a C program to find the largest of three numbers. (6 Marks)

Sample Input:

10 25 5

Sample Output:

Largest = 25

- d) Differentiate between 'if', 'if-else', and 'switch' statements. (6 Marks)

QUESTION FOUR (20 MARKS)

- a) What is an access modifier? Explain the different types of access modifier as used in C. (4 Marks)
- b) Describe the basic structure of a C Program (4 Marks)
- c) Using a program example illustrate how to declare a variable in C programming (4 Marks)
- d) Explain four purposes of comments in programming? (4 Marks)
- e) Differentiate between a variable and a constant (4 Marks)

QUESTION FIVE (20 MARKS)

- a) Explain program development lifecycle in detail outlining the steps (8 Marks)
- b) Contrast between local and global variables (4 Marks)
- c) What is a variable? Explain the different ways to initialize a variable in C. (4 Marks)
- d) Write a program to multiply two matrices. (4 Marks)

Sample Input:

A[2x2], B[2x2]

Sample Output:

Resultant Matrix C[2x2]