KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF

CERTIFICATE IN INFORMATION TECHNOLOGY

FIRST SEMESTER, 2023/2024

(AUGUST-DECEMBER, 2023)

CIT 0108: COMPUTER PROGRAMMING

STREAM: Y1 S1   **TIME: 2 HOURS**

DAY: FRIDAY, 9.00 – 11.00 AM   **DATE: 01.12.2023**

INSTRUCTIONS

1. *Do not write anything on this question paper.*
2. *Answer Question ONE [Compulsory] and any other TWO Questions*

QUESTION ONE (30 MKS)

a) Outline four advantages of sub-programs in a computer program.

(8marks)

b) Explain the concept of Recursive function as used in programming

(4marks)

c) A student wrote a program in C language. Explain four modes that the student would use open a data file in this program   (8 marks)

d) Explain five features of high level language   (10 marks)

QUESTION TWO

a) Outline three reasons for compiling a program under development   (10 marks)

b) Write program in C language that prompts a user to enter five different marks for a list in an array_ the program then computes and displays the average murk correct to two decimal places.   (10 marks)

QUESTION THREE

a) Differentiate between monolithic and modularity approaches to programming.
   (6marks)

b) Explain two types of test data used during prograrn testing.   (4marks)

c) Explain two types of errors that arc encountered when developing program.

(4 marks)

d) Write an algorithm that could use to add an element in a stack data structure

(6 marks)

QUESTION FOUR

a) Describe each of the following terms as used in programming   (6 marks)
 i.   Reserved word;
 ii. Dry run
 iii. Order of priority

b) The data input to a program array is as follows; 54, 33, 16, 23, 15. The data is to be sorted in ascending order using the insertion sort method. Show all the steps 10 he taken to sort this data   (10 marks)

c) Differentiate between break and continue   (4 marks)

QUESTION FIVE

a) Outline four advantages of using pseudo code during program design.

(6 marks)

b) Write program in C language that prompts a user to enter five different marks The program then computes and displays the average   (10 marks)

c) Outline rules to follow when writing c program   (4 marks)