KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN INFORMATION TECHNOLOGY
FIRST SEMESTER, 2023/2024

(AUGUST-DECEMBER, 2023)
CIT 0104: INTRODUCTION TO PROGRAMMING & ALGORITHMS

STREAM: Y1 S1 **TIME: 2 HOURS**
DAY: TUESDAY 3.00 – 5.00 PM **DATE: 28/11/23**

INSTRUCTIONS

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

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Question 1 (COMPULSORY)

a. Define the term flowchart? 2mks
b. Distinguish between high level and low level programming? 2mks
c. State three examples of high level programming languages? 3mks
d. What is an algorithm? 3mks
e. List three types of algorithms and briefly explain? 6mks
f. Distinguish between a flowchart and a pseudo code? 4mks
g. Differentiate between source code and object code? 4mks
h. State 3 types of control structures 6mks

Question 2

a. What is a pseudo code? 2mks
b. State three guidelines of writing pseudo codes 6mks
c. Write a pseudo code for a program to find the sum of two numbers and display the result. 12mks

Question 3

a. Explain the following term as used in programming?
   i. Interpreters 4mks
   ii. Assemblers 4mks
   iii. Compilers 4mks

b. Differentiate between compilers and interpreters? 8mks

Question 4

a. What is a program error? 3mks
b. State and briefly describe three types of errors? 9mks
c. How are errors avoided in programming? 3mks
d. Define the term machine language? 2mks
e. What are three modes of error detection? 3mks

Question 5

a. Why is machine language considered faster in processing 3mks
b. Define the term flowchart? 3mks
c. List two importance of flowchart? 4mks
d. Draw a flowchart to award medals to athletes based on the following criteria
   1st Position - Gold
   2nd Position - Silver
   3rd Position - Bronze 10mks