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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FOR THE CERTIFICATE IN INFORMATION TECHNOLOGY
CIT 1002 – STRUCTURED PROGRAMMING

Date: 11TH December 2023
Time: 8:30AM – 10:30AM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- The four relational operators together with two equality operators are known as logical expressions. Highlight the six logical expressions operators (6 Marks)
- Explain the reasons why C language is popularly used over other programming languages in this era of technology. (3 Marks)
- Write a simple C program script that shows the difference in the use of printf() and scanf() functions (4 Marks)
- State the various control structures used in C programming language (6 Marks)
- Define high level language and list high level languages used in programming (5 Marks)
- The elements of C programming language are like the main parts of the C codes. Explain the three main parts. (6 Marks)

QUESTION TWO (20 MARKS)

- Discuss the various tools used to transform the instruction prepared by programmers into a form which can be interpreted and executed by the computer (8 Marks)
- Write a C program that displays the use of backspace or escape sequence and outputs three lines (8 Marks)
- Explain files used in C program to ensure that the program runs (4 Marks)

QUESTION THREE (20 MARKS)

- Calculating the area of a circle using floating point numbers is challenging for most of the students. Create a simple system that prompts the student to enter values and calculates the area of a circle (10 Marks)

- Following is a simple sample of a C program

```
/* This is my first C program,  
as junior programmer*/  
#include<stdio.h>  
main ()  
{  
printf("Hello World \n"); // the output  
return 0;  
}
```

Discuss a stepwise explanation of the above sample program

(10 Marks)

QUESTION FOUR (20 MARKS)

- a) C supports five basic data types. Giving examples of each, discuss the data types along with the C keywords that represent them (10 Marks)
- b) Write a C program using a 'while' control structure to output values 39 to 20 (10 Marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the order of executing the following expression in C programming language. (10 Marks)

book = 250.0 + 600.0 * z / sheet;

Where z = 50.0 and sheet= 20.0.

- b) C program has different operators. Highlight arithmetic operators, giving examples of each (10 Marks)