KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR
FIRST YEAR, FIRST SEMESTER EXAMINATION
FOR THE CERTIFICATE IN INFORMATION TECHNOLOGY
CIT 1002: STRUCTURED PROGRAMMING

Date: 15TH APRIL 2024
Time: 11:30AM-1:30PM

INSTRUCTIONS TO CANDIDATES
ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS
QUESTION ONE (30 MARKS)

a)   Define the term format specifier and indicate format specifiers used in C program with their functions.   (5 Marks)

b)   Discuss the different types of errors in C programming language, giving example of each.   (6 Marks)

c)   State the various types of Variables in C programming Language.   (4 Marks)

d)   Write a simple C program that displays your name on the screen.   (6 Marks)

e)   Explain the different types of control structure used in C programming Language.   (6 Marks)

f)   Describe ways Constants can be used in C expressions, giving example of each.   (3 Marks)

QUESTION TWO (20 MARKS)

a)   Using examples, explain the various classifications of computer languages.   (8 Marks)

b)   Computers don't understand instructions given in alphanumeric they need transformation tools. Discuss the tools used to transform the instructions prepared by programmers into a form which can be interpreted and executed by the computer.   (5 Marks)

c)   Describe steps followed in program development by programmers to ensure the program is easy to read, test, debug and modify.   (7 Marks)

QUESTION THREE (20 MARKS)

a)   Explain various components that make up a typical C program.   (6 Marks)

b)   Describe files used in C program and indicate the file extension of each file.   (4 Marks)

c)   Write simple program in C language that allows the user to display the following:

   i)   First Name   (5 Marks)

   ii)   University Name   (5 Marks)

QUESTION FOUR (20 MARKS)

a)   Explain the following program line by line;   (10 Marks)

```
#include<stdio.h>
#define PI 3.14
main()
{
float radius, area;
printf("Enter the radius of the circle \n");
scanf("%f", &radius);
area = PI * radius * radius; /* PI is a symbolic constant */
printf("Area is %.2f cm squared ",area);
return 0;
}
```

b)   Write a program that computes the area of a rectangle, given its dimensions. It first
prompts the user for the length and width of the rectangle and then displays the area.

(10 Marks)

QUESTION FIVE (20 MARKS)

a)   Write C program that can be used to output thirty to five using a 'for' loop. (10 Marks)

b)   Define the term array and explain the various array dimensions.   (5 Marks)

c)   Highlight the various arithmetic operators in C language.   (5 Marks)