



Kasarani Campus
Off Thika Road
Tel. 2042692 / 3
P. O. Box 49274, 00100
NAIROBI
Westlands Campus
Pamstech House
Woodvale Grove
Tel. 4442212
Fax: 4444175

KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR
FIRST YEAR, FIRST SEMESTER EXAMINATION
FOR THE DIPLOMA IN BUSINESS & INFORMATION TECHNOLOGY
DIT 1002 – STRUCTURED PROGRAMMING

Date: 11TH April 2024
Time: 2:30PM – 4:30PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- Describe files used in C program and indicate the file extension of each file (4 Marks)
- Define the term format specifier and indicate format specifiers used in C program with their functions (4 Marks)
- Variables are used to store data of different kinds. State the various types of Variables in C programming Language (5 Marks)
- Write a C program that displays your name on the screen (5 Marks)
- A C program is made up of different components. Explain components that make up a typical C program (6 Marks)
- While programming, a programmer might make a number of errors. Discuss the different types of errors in C programming language (6 Marks)

QUESTION TWO (20 MARKS)

- Using examples, explain the various classifications of computer languages (8 Marks)
- 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)
- Describe steps followed in program development to ensure the program is easy to read, test, debug and modify (7 Marks)

QUESTION THREE (20 MARKS)

- Explain the following C program line by line (10 Marks)

```
/* This is an example of control structure program */  
#include<stdio.h>  
main ( )  
{  
int count;  
count = 50;  
while (count < 670)  
{  
printf ("The value of count is %d\n", count);  
count = count + 1;  
return 0;  
}  
}
```

- b) Write simple program in C language that allows the user to display
- i) username (5 Marks)
 - ii) password (5 Marks)

QUESTION FOUR (20 MARKS)

- a) Highlight the various logical expression in C language, giving example in each using variables and values (5 Marks)
- b) Write a program that computes the area of a triangle, given its dimensions. It first prompts the user for the base and height of the triangle and then displays the area($\text{area}=0.5*\text{base}*\text{height}$) (7 Marks)
- c) State the four basic types of constants used in C programming language, give examples (8 Marks)

QUESTION FIVE (20 MARKS)

- a) Write C program that can be used to output zero to nine using a 'do-while' loop (8 Marks)
- b) Define the term array and explain the various array dimensions, declare each (7 Marks)
- c) Differentiate the two special pointer operators, write a short program to demonstrate the difference (5 Marks)