MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

TVET EXAMINATION

2023/2024 ACADEMIC YEAR

FIRST YEAR **SECOND** SEMESTER EXAMINATION FOR DIPLOMA IN INFORMATION TECHNOLOGY

IT-OS-ICR-10-6-DEVELOP COMPUTER PROGRAM

DURATION: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

1. Answer question one and any other two questions.

2. Mobile phones are not allowed in the examination room.

3. You are not allowed to write on this examination question paper.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE (30 MARKS)

a. Differentiate the following as used in computer programming.   (6 marks)
   - i. Reserved word and identifier
   - ii. Data type operator
   - iii. Print and scan
b. With an example describe c language as a tree format and portable programming language.
                                                                          (2 marks)
c. Write a program that prompt for the input of two integer value determine if they are both even and if they are the programme output
   "THE NUMBER ARE EVEN".   (4 marks)
d. Suppose a, b, c are valuables that have been assigned the value $a = 2, b = 4$ and $c = -6$ determine the value of each of the following expressions
   - i. 2*b +3*(a-c).   (2 marks)
   - ii. (A*c) %b.   (2 marks)
e. Identify four benefit of flow charts in computer programming.   (4 marks)
f. State the stages used to develop c programme.   (4 marks)
g. Outline three characteristics of a good programming language.   (3 marks)
h. Describe two data types in c programming.   (3 marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO (20 MARKS)

a. Explain what valuable are given an example.   (3 marks)
b. Using functions write ac program to input two number as argument and return the value of their value of their sum.   (6 marks)
c. A sales person for mobile handset selling company arms a basic salary 20,000a commission of 2%for total sales for the months and bonus of 300 for every handset sold during the month. Write a programme to calculate the gross salary for a worker at the end of the month when the number of handsets sold is keyed in.   (6 marks)

QUESTION THREE (20 MARKS)

a. Explain a token Give an example in each.   (4 marks)
b. Using any loop structure write a programme that prints out the number below. (8 marks)
   10
   15
   20
   25
   30

The table below shows some of the counties in Kenya and their governor use it to answer the following questions

County No	County Name	Governor
01	Mombasa	Abdnasis
12	Meru	Mwangaza
47	Nairobi	Sakanja
	Machakos	Wavinya

Write ac program to accept the country number and governor based on the number entered.

(8 marks)

QUESTION FOUR (20 MARKS)

a. List any five library functions stating clearly the header files in which they are found.

(8 marks)

b. What is an array? declare a two-dimension array called student. (6 marks)

c. Identify syntax error in the following program after correction what output would you expect when you execute it. (6 marks)

```
#define pi3.14159
Mainc)
IntR,C
Float area
C=p1
R=s
Perimeter=20*c*R
AREA=C#R#R
Print {"%d" & perimeter $ area.
}.
```

(6 marks)