(University of Choice)

MASINDE MULIRO UNIVERSITY OF

SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2021/2022 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER EXAMINATION

FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

COURSE CODE: DIT 058

COURSE TITLE: INTRODUCTION TO PROGRAMMING

DATE: 01/08/2022   **TIME: 11AM – 1PM**

INSTRUCTIONS TO CANDIDATES:
Answer Question **ONE** and any Other **TWO** questions

   Answer -------------
TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 3 Printed Pages. Please Turn Over   .

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QUESTION ONE 24 MARKS.

a. Differentiate the following terms as used in the C programming language. 10mks
   i. Statement and Function.
   ii. Variable and identifier.
   iii. Expression and comment.
   iv. System software and application software.
   v. Language Translators and compiler.
b. C programming language has become a widely used professional language by programmers. Explain. 4mks
c. Write a C program that prints an inverted right-angled triangle when the program executes. 4mks.
d. Explain the errors in the C programming language. 6mks

QUESTION TWO 18 MARKS.

a. Write a C program that takes an integer input from the user and computes the factorial of the integer. 5mks
b. Identify the errors in the above code. 3mks

```
int main () {
int x
int y
for (x=5; x<=0; x++){
  for (y=0; y<=x; y++){
    printif('*');
  }

}
}
```

c. In a mathematics class, class 5 pupil was asked to identify all prime numbers between 0 and 100. Write a C program that will help the pupil solve the problem. 6mks.
d. Write a C code that takes two integer values from the user and returns the sum. 4mks.

QUESTION THREE 18 MARKS.

a. What is programming 1mk
b. Explain the structure of C program. 5mks
c. Function calling in C programming can be done in two ways, explain. 4mks
d. Identifier naming in C programming is governed by certain rules. Explain. 4mks
e. Data types refer to the extensive system used for declaring variables or functions of different types. Explain the various data types used in C. 4mks

QUESTION FOUR 18 MARKS.

a. C programming language is rich in operators. Explain examples of logical operators.

6mks

b. Given the rules Give the values A=33 and B =2 C=5 what will be the output of the following computations.

      i. A%B   2mks

      ii. A+=C+B   2mks

      iii. A-=C+B   2mks

      iv. C*=(B+A)   2mks

c. Write a C program that takes in two numbers, compares and outputs numbers1 is greater than number2, number2 is greater than number1 or number1 is equal number2 depending on the prevailing situation.

4mks

QUESTION FIVE 18 MARKS.

a. Explain the difference between a while loop and a do-while loop   2mks

b. With an example of a code describe the syntax of a for loop.   4mks

c. Using a diagram, explain the flow diagram of an if else statement   4mks

d. Describe the structure of a switch statement   2mks

e. Explain what happens when an executing program encounters the following statements.

      i. Break;   2mks

      ii. Go to;   2mks

      iii. Continue;   2mks