(Knowledge for Development)

KIBABII UNIVERSITY (KIBU)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY EXAMINATION

SECOND YEAR FIRST SEMESTER EXAMINATION

FOR THE DIPLOMA IN

(INFORMATION TECHNOLOGY)

COURSE CODE: DIT 066
COURSE TITLE: PROCEDURAL PROGRAMMING

DATE: 18/07/2022   TIME: 8.00 A.M. – 10.00 A.M.   2HRS

INSTRUCTIONS TO CANDIDATES:
ANSWER QUESTIONS ONE AND ANY OTHER TWO.

Paper Consists of 3 Printed Pages. Please Turn Over ➡

QUESTION ONE (COMPULSORY) [24 MARKS]

a) Define the following terms as used programming

   i.   Object oriented programming   (2mks)

   ii.   high level programming language   (2mks)

b) Give any four applications of C++ programming language   (4mks)

c) Differentiate between a compiler and an interpreter   (3mks)

d) Below is a sippet of a c plus programming language. State the results of line 1,2,3.

                                                     (4mks)

```
main() {
  int x = 21;
  int y ;
c = x++;
  cout << "Line 1 << y << endl ;
  cout << "Line 2:" << x << endl ;
  c = ++x;
  cout << "Line 3:" << y << endl ;
  return 0;
}
```

e) Write any three rules one should observe when declaring variables   (3mks)

f) Write a C ++program that calculates the volume of a sphere using a function.   (6mks)

QUESTION TWO [18 MARKS]

a) Give two reasons why arrays are useful in programming   (4mks)

b) Write a C++ program using a for loop to count from 1 to 100.   (6mks)

c) Write a C++ program using a function to calculate surface area of a cylinder.   (8mks)

QUESTION THREE [18 MARKS]

a) Outline four differences between a procedural programming and object oriented
programming.   (4mks)

b) Differentiate between call by value and call by reference.   (4mks)

c) Write a C ++ program that calculates the volume of a cuboid using a function.

(10mks)

QUESTION FOUR [18 MARKS]

a) Using a example show two ways in which use comments in C++ (4mks)

b) Write a C++ program using a while loop to count from 1 to 20. (6mks)

c) Write a C++ program using a function to calculate area and circumference of a circle.

(8mks)

QUESTION FIVE [18 MARKS]

a) Write a C++ statement that declares that a program will be accessing entities whose names are part of the namespace. (2mks)

b) Using a diagram differentiate between a while loop and a do…while loop (3mks)

c) Outline any four features of procedural programming language (4mks)

d) Differentiate between formal and actual parameters. (4mks)

e) Write a C++ program that calculates the area of a triangle (5mks)