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UNIVERSITY
A Dynamic Centre of Academic Excellence

SCHOOL OF PROFESSIONAL STUDIES

BACHELOR OF INFORMATION COMMUNICATION TECHNOLOGY

UNIT CODE/NAME: BCT 114: FUNDAMENTALS OF COMPUTER PROGRAMMING

September - December 2020/2021 End Semester Exam - Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

QUESTION ONE

- a) Describe any four tokens and give relevant examples. **(4 Marks)**
- b) List and describe four translators and also give relevant examples for each of them. **(8 Marks)**
- c) Explain the three control structures needed to implement a program. **(6 Marks)**
- d) Describe the stages which a typical C++ program goes through? **(12 Marks)**

QUESTION TWO

- a) Distinguish the difference between pseudocode and algorithm. **(4 Marks)**
- b) Write a simple program that displays the following words: **(4 Marks)**
Welcome to C++ Programming Language
- c) List and explain the six logical sections of a computer. **(7 Marks)**

QUESTION THREE

- a) Mention the error and give the correction in each of the following: **(6 Marks)**
 - i)

```
do{ product = num1 * 2;
    num1++;
} while ( num1 <= 100 );
```
 - ii)

```
std::cout<<"Welcome to C++ programming"<<std::endl;
```
 - iii)

```
if ( person == 1 )
    std::cout<<"Man" <<std::endl;
else (person == 2)
    std::cout<<"Man" <<std::endl;
```

b) Write a program which finds the modulus of two numbers and displays the result.

(9marks)

QUESTION FOUR

a) Differentiate between recursive functions and iterative functions.

(2 Marks)

b) Explain three major categories which are used to classify the programming languages.

(5 Marks)

c) Write a program that declares an array using an initializer list and display the array.

(8Marks)

QUESTION FIVE

a) Briefly explain the difference between the do while and the while repetition statements.

(4 Marks)

b) Write a simple program that prompts the user for marks and assigns her the grade they attained using the **if...else statement**.

(8 Marks)

c.) Differentiate between static typing and dynamic typing of programming

(4 Marks)