PIONEER INTERNATIONAL UNIVERSITY

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UNIVERSITY EXAMINATIONS

ACADEMIC YEAR: 2020/2021

UNIT NAME: OBJECT ORIENTED PROGRAMMING (C++)

SEMESTER: SEPT - DEC 2021

UNIT CODE: BSIT 2131

DATE: DEC 2021

TIME: 2 HOURS

Instructions: Answer SECTION A (Compulsory) and Any Other Two Questions

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QUESTION ONE (30 MARKS)

a.   Using appropriate examples discuss the following OOP concepts.

   i.   Class   (3 marks)

   ii.   Inheritance   (3 marks)

   iii.   Abstraction   (3 marks)

   iv.   Encapsulation.   (3 marks)

   v.   Polymorphism.   (3 marks)

b.   Write programs using any type of loops (i.e. for loop, while loop, do while loop) to   find the sum of first n natural numbers   (5 marks)

c.   Write a program using a class called **MyClass** that consist of a main method and asks the user to input an integer and the method returns whether it's even or odd (5 marks)

d.   Write a class having two private variables and one member function which will return the area of the rectangle.   (5 marks)

QUESTION TWO (20 MARKS)

a.   Using appropriate examples discuss types of comments support by C++ language.
                                                                    (5 marks)
b.   Using relevant examples write two ways of declaring variable in C++ language.
                                                                    (5 marks)
c.   Using appropriate examples, discuss the scope of global and local variable in C++
      language.   (5 marks)
d.   Write a C program to find the sum of first 10 natural numbers   (5 marks)

QUESTION THREE (20 MARKS)

a.   List down five control flow structures supported by C++ language.   (5 marks)

b.   Using relevant examples, write the syntax for each of the control flow structure above in
      A.   (5 marks)

c.   Write a program to demonstrate the two ways we define functions that belongs to a
class in object oriented programming i.e. inside class definition and outside class definition

                                                                    (10 marks)

QUESTION FOUR (20 MARKS)

a.   Write a C++ program that will convert a text to a file.   (10 marks)

b.   Write a C++ program that will accept input from a user to capture FirstName, and
      LastName then display output in the console.   (10 marks)

QUESTION FIVE (20 MARKS)

Write down C++ code to implement the following

a.   A C++ function that output an arithmetic modulus.   (5 marks)

b.   A C++ program that open a file display the content in console.   (5 marks)

c.   A C++ program that implements inheritance.   (10 marks)