



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, 91 CADASTRAL ZONE, NNAMDI AZIKWE
EXPRESSWAY, JABI, ABUJA
FACULTY OF SCIENCE
2020_2 EXAMINATION

COURSE CODE: CIT834

COURSE TITLE: Object Oriented Programming using C#

CREDIT: 3 Units

TIME ALLOWED: 2½ Hours

INSTRUCTION: Answer Question ONE (1) and any other FOUR (4) Questions

- 1(a) Analyse the differences and similarities of a constructor and a destructor [5 marks]
- (b) How is object oriented programming related to polymorphism [4 marks]
- (c) Syntactically define C# indexer page [4 marks]
- (d) How is static property different from private variable [4 marks]
- (e) Identify the strengths of method overloading [5 marks]
- 2(a) Demonstrate with examples the relationship between a class and an object [4 marks]
- (b) Demonstrate how .net framework manages memory through garbage collection [3 marks]
- (c) Demonstrate with an example of a **car** the concept of a state of an object [5 marks]
- 3 (a) Write a C# program to display the text “ COVID-19 is real, please stay safe” using the WriteLine method. [4 marks]
- (b) Identify 5 attributes of static constructors [5 marks]
- (c) Justify the use of encapsulation in Object Oriented Programming [3 marks]
- 4 (a) Declare 3 methods name; CustomerRecord, DepositMoney, and GetBalance and return no value under a class named customer. [8 marks]
- (b) Refer to 4(a) above Call the method with the customer number “7777” who has 5,000 Naira in his account and is depositing 2,000 Naira. [4 marks]
- 5(a) Appraise the usefulness of static constructors [6 marks]
- 5(b) The area of a triangle with base of 10cm and height of 20 cm is to be calculated. Declare a static method that will aid in the calculation. [6 marks]
- 6 (a) Write a C# program to add increment operator and test the program with (10,15) and display the results on console. [6 marks]
- 6(b) Illustrate syntactically, the declaration of a binary operator and explain each line of the illustration [6 marks]