



**NATIONAL OPEN UNIVERSITY OF NIGERIA,  
PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI – ABUJA  
FACULTY OF SCIENCES**

**JULY 2017 EXAMINATION**

**COURSE CODE: CIT 834**

**COURSE CREDIT: 3**

**COURSE TITLE: OBJECT-ORIENTED PROGRAMMING USING C#**

**TIME ALLOWED: 3 Hours**

**INSTRUCTION: Answer question 1 and any other four (4) questions**

**QUESTIONS**

- 1a. In order to assess your expertise in Object-Oriented Programming Using C# Programming, you are required to write a standard C# Program to carry out two mass calculations and provide the output of the call count property, where the density is given as 40; Volume1 = 120; Volume2 = 140. (12 marks)
- 1b. Outline the procedure involved in constructing a simple Two-Dimensional Vector Class having K and L as its properties. (8 marks)
- 1c. In simple terms, describe a destructor within the context of Object-Oriented Programming (2 marks)  
**[Total = 22 marks]**
- 2a. If a specific integer is given as 8, write down a simple C# Program to compute and output the square of this integer. (7 marks)
- 2b. Give a concise explanation of the concept of operator overloading. (2 marks)
- 2c. State at least one application of the notion of operator overloading. (2 marks)
- 2d. What is the role of the signature with respect to methods in C# Programming. (1 mark)  
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**[Total = 12 marks]**
- 3a. What steps would you adopt in creating a new project named '**Practise.cs**'? (6 marks)
- 3b. Give a brief explanation of the term 'binary operator'. (2 marks)
- 3c. Write down two (2) classic components of a binary operator . (4 marks)  
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**[Total = 12 marks]**

4a. In simple terms, describe how static methods are called in C# (4 marks)

4b. State the code for accomplishing the following in C#:

i. Adding a mass calculation method to the new class (2 marks)

ii. Adding a read-only call count property to a class. (2 marks)

4c. Write down any four (4) properties of Static constructors (4 marks)

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**[Total = 12 marks]**

5. Go through the source code carefully and answer the questions that follow:

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;
```

5a. Give a brief description of the term 'keyword'. (2 marks)

5b. Write down the keyword in the source code provided. (1 mark)

5d. State the main role of the keyword you have specified. (2 marks)

5d. Outline the steps required to build a new project named '**Abuja**' and setup a form using the Windows Application template. (7 marks)

**[Total = 12 marks]**

6a. Based on the premise that you have successfully completed the course in Object-Oriented Programming using C#, a newly registered learner has just approached you for guidance on how to build a C# sample in a Microsoft.NET 2.0 SDK Framework. Outline the procedure you would adopt in order to accomplish this requisite assignment. (6 marks)

6b. Give a short description of the following features in a common FCL library:

- i. Interop
- ii. Thread management
- iii. Type loading

) 2 marks

) 2 marks

) 2 marks

**[Total = 12 marks]**