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**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**

**MARCH/APRIL 2016 EXAMINATION**

 **SCHOOL OF SCIENCE AND TECHNOLOGY**

**COURSE CODE: CIT 351**

**COURSE TITLE: C# Programming**

**TIME ALLOWED: 21/2 Hours**

**INSTRUCTION: Answer any four (4) questions.**

**QUESTIONS**

1a. State the general syntax for declaring a variable in C# (4 marks)

1b. State the main role of each part of the syntax. (4 marks)

1c. Give the guiding principle for accomplishing the following:

1. Grouping statements into one unit (2 marks)
2. Designating an end statement (2 marks)
3. Enhancing a source code legibility (2 marks)

1d. Enumerate 4 most commonly used data types in C# programming (31/2 marks)

 **[Total = 171/2 marks]**

2a. Describe how memory leaks are handled in C# programming? (51/2 marks)

2b. Give a brief explanation of any 3 template types accessible in Visual C# projects. ( 3 x 4 = 12 marks)

 **[Total = 171/2 marks]**

3a. What is the main significance of VisualStudio.NET with respect to having an

 Integrated Development Environment? (21/2 marks)

3b. List 3 regular programming tasks carried out in VisualStudio.NET. (6 marks)

3c. What is the implication of using the Microsoft's .NET Framework libraries

 when naming objects in C#? (4 marks)

3d. Spot 5 statements in the following source code specifying their corresponding

 roles.

**Int sampleVariable;**

**sampleVariable = 5;**

**Method();**

**SampleClass sampleObject = new SampleClass();**

 **sampleObject.ObjectMethod();**

**< //executing a “for” loop with an embedded “if” statement**

 (5 marks)

 **[Total = 171/2 marks]**

4a. Give any four (4) reasons why statements are considered to be critical for C#

 program execution. (4 marks)

4b.With the aid of two (2) common examples, explain why C# is said to be a case-

 sensitive programming language. . (4 marks)

4c. Write down the corresponding C# aliases of the following C# Primitive types:

1. Int32 (1/2 mark)
2. Single (1 mark)
3. Int64 (1 mark)
4. Double (2 marks)
5. Byte (1 mark)
6. Char (1 mark)
7. Decimal (1 mark)
8. SByte (1 mark)
9. UInt32 (1 mark)

 (1/2 + 1 + 1 + 2 + 1 + 1 + 1 + 1 + 1 + 1 = 9 1/2 marks)

**[Total = 171/2 marks]**

5. Study the figure provided and answer the subsequent questions:



5a. Identify and name the object within the source code. (3 marks)

5b. Write the command line for compiling this object. (101/2marks)

5c. Name any 2 operators in this source code. (4 marks)

**[Total = 171/2 marks]**

6a. Write down the source code for compiling a file named **Economy.cs** on the hard

 drive of a computer. (61/2 marks)

6b. Provide the appropriate comment for the following:

1. XML documentation ) 3 marks each; 3x3=9 marks
2. Multiple line
3. Single line

6c. What is the implication of declaring a Method as static? (2 marks)

 **[Total = 171/2 marks]**