



**NATIONAL OPEN UNIVERSITY OF NIGERIA,  
PLOT 91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI – ABUJA  
FACULTY OF SCIENCES  
DEPARTMENT OF COMPUTER SCIENCE  
OCTOBER 2019 EXAMINATION**

**COURSE CODE: CIT 351**

**COURSE TITLE: C# PROGRAMMING**

**COURSE CREDIT: 2 UNITS**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS**

**QUESTIONS**

1a. Based on the assumption that you have just completed the course C# Programming, you are expected to give a short explanation of the following declarations:

- i. Managed memory cannot be explicitly freed. (4 marks)
- ii. C# is a multi-paradigm programming language. (2 marks)

1b Extensively analyse the term ‘Statements’ within the context of C# programming . (8 marks)

- 1c. i What are C# comments? (2 marks)
- ii. Identify and discuss the 3 common styles of comments allowed in C# programming . (9 marks)

**[Total = 25 marks]**

2a. Fill in the appropriate primitive data types in C# and their corresponding descriptions in **Table 1** provided.

(9 marks)

**Table 1.**

<b>C# Primitive</b>	<b>C# Alias</b>	<b>Description</b>
	Byte	
	Char	
	Decimal	
	Double	
	Float	
	Int	

2b. Outline three (3) main aims of the ECMA. (6 marks)

**[Total = 15 marks]**

3a. Identify and state the two (2) main distinctions between value types and reference types. (3 marks)

3b. Analyse four (4) basic rules that apply to C# code syntax.

(12 marks)

**[Total = 15 marks]**

4a. Write down the C# statement to convert the following object box to a **value-type**:

```
object box = 46;
```

```
int i = (int)box;
```

(6 marks)

4b. Specify the condition for an unboxing conversion to a given value-type to succeed at run-time. (3 marks)

4c. Memory address pointers in C# are used within unsafe blocks. Discuss.

(6 marks)

**[Total = 15 marks]**

5a. Write down the standard syntax for declaring a variable in C#. (2 marks)

5b. Provide a brief explanation of the following **int count**; within the context of C# programming . (2 marks)

5c. Give four (4) outstanding features of primitive data types in C#. (8 marks)

5d. State the main reason why C# disallows the integer meaning 'true or false'. (3 marks)

**[Total = 15 marks]**