

Subject: C# & .NET

Time: 3 Hours

Max. Marks: 100

JUNE 2011

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 Minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions, answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

Q.1 Choose the correct or the best alternative in the following: (2×10)

a. Which of the following types cannot be used to control a switch statement in C#?

- (A) integer (B) character
(C) String (D) floating point

b. In C# you can create an infinite loop using the syntax:

- (A) for(; ;) { } (B) for() { ; ; }
(C) for() { } (D) None of the above.

c. An example of ternary operator in C# is :

- (A) ? : (B) ^ =
(C) >> (D) > =

d. A switch statement can be used to replace a:

- (A) simple if else statement. (B) while statement.
(C) series of if...else statement. (D) foreach statement.

e. String class supports overloaded methods and operators to compare whether two strings are equal or not by using :

- (A) Overloaded Compare() method. (B) Overloaded Equals() method.
(C) Overloaded Cmp() method. (D) Both (A) and (B).

f. Late binding can also be called:

- (A) Dynamic binding (B) Static binding
(C) Abstract binding (D) Sealed Binding.

g. Delegates are of:

- (A) Value type. (B) Reference Type
(C) Both (A) and (B). (D) None of the above

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- h. Which of the following is not from the Input/Output streams?
- (A) Console. In (B) Console.Out
(C) Console.InOut (D) Console. Error.
- i. Which of the following is not in correct sequence while handling exception is C#?
- (A) try.....finally... (B) try...catch...catch...finally..
(C) try....catch...finally... (D) catch...finally.
- j. Which of the following is an example of a correct String class method:
- (A) Cmp() (B) Cpy ()
(C) ConCat() (D) None of the choices
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**Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.**

- Q.2** a. What is common language specification? How does the CLR implements a C# program? (6)
- b. What are command line arguments? How are they useful? (6)
- c. Explain with the help of a neat diagram the taxonomy of C# data types. (4)
- Q.3** a. List the relational and logical operators available in C#. Write a simple C# program which demonstrates the use of these operators. (8)
- b. Write a program by using while loop to reverse the digits of the numbers.
For example: Input : 12345
Output : 54321 (8)
- Q.4** a. With suitable example explain the concept of pass by value and pass by reference in C#. (6)
- b. What is the need for jagged array in C#? Give an example. (4)
- c. Write a C# program that creates an array of integers and gives it some initial values. The program should display these values and their summation (use the foreach construct of C#). (6)
- Q.5** a. Explain any three string handling methods available in C#. Emphasize on the general syntax of the method and its description. (6)
- b. Write a C# program that reads an integer and displays the digits of the integers in words. (6)

Example: 543
Number in Words: FIVE FOUR THREE.

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- c. State the difference between Classes and Structures. Explain your answer with suitable code snippets. (4)
- Q.6** a. Explain the different member access specifiers available in C#. (6)
- b. What are Abstract Classes and Methods, Explain their importance. (5)
- c. What is inheritance? Explain classical inheritance with suitable diagrams. (5)
- Q.7** a. Distinguish between an abstract class and an interface. (8)
- b. Describe overloading of unary and binary operators. (8)
- Q.8** a. Explain the importance of delegates in C#. Write a simple C# code to create and implement a delegate. (6)
- b. List the console Input and Output statements available in C#. (2)
- c. What are Events? Write a C# program which demonstrates the features of an event. (8)
- Q.9** a. How do you define the following in C#:
(i) try block.
(ii) catch block.
(iii) finally block. (6)
- b. List any four commonly used exceptions defined within the System Namespace. (2)
- c. What is a thread in C#? Write a simple C# program which creates three child threads. (8)