

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2144

Roll No.

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MCA
(SEMESTER-V) THEORY EXAMINATION, 2012-13
DOT NET FRAMEWORK & C#

Time : 3 Hours]

[Total Marks : 100

Note : Attempt questions from each section as indicated.

Section – A

1. Attempt **all** parts :

10 × 2 = 20

- (a) What do you mean by saying a “class is a reference type” ?
- (b) List the 5 different access modifiers in C# ?
- (c) What are the 3 types of comments in C# ?
- (d) What do you mean by String objects are immutable ?
- (e) What will be the output of the following code ?

```
string str1 = "Hello";
```

```
string str2 = s1;
```

```
str1 = str1 + "C#";
```

```
System.Console.WriteLine(s2);
```

- (f) Give example of a static function.
- (g) What are the 2 kinds of data type conversions in C# ?
- (h) What's the differences between the System.Array.CopyTo() and System.Array.Clone()?
- (i) What is Microsoft Intermediate Language (MSIL) ?
- (j) Explain the difference between typeof and Type.GetType.

Section – B

2. Attempt any **three** parts :

3 × 10 = 30

- (a) What is a verbatim string literal and why do we use it ? Explain.
- (b) Explain polymorphism in C# with a simple example.
- (c) Write a program in C# to sort an array into descending order.
- (d) Give an example in C# to pass value types by reference to a method ?
- (e) (i) Is the following code legal ? Why ?

```
using System;
namespace Demo
{
    class Program {
    public static void Main( )
    {
        .....
    }
    public void Sum(int FirstNumber, int SecondNumber)
    {
        int Result = FirstNumber + SecondNumber;
    }
    public int Sum(int FirstNumber, int SecondNumber)
    {
        int Result = FirstNumber + SecondNumber;
    }
}
```

- (ii) What is the difference between method parameters and method arguments. Give an example.

Section – C

Attempt any **five** questions :

10 × 5 = 50

- 3. Give an example to show for hiding base class methods ?
- 4. Can a nested class access the outer class ? Give an example.
- 5. SqlConnection objects let other ADO.NET code know what database to connect to and how to make the connection. Explain, giving a code snippet the sequence of operations occurring in the lifetime of a SqlConnection.

6. Using GDI, create an application for converting an image from colour to grayscale.
 7. Explain the .NET assembly feature with the help of a block diagram.
 8. Write codes in C# for Creating, starting and interacting between threads.
 9. Create a simple web service in C# and then create a small client program to use this web service. What is the output of your program ? How will you use Web Service in Internet Information Service (IIS) ?
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