

(Please write your Exam Roll No.)

Exam Roll No. ....

# END TERM EXAMINATION

## THIRD SEMESTER [MCA] DECEMBER-2013

*Paper Code: MCA 209*

*Subject: C# Programming*

**Time : 3 Hours**

**Maximum Marks : 60**

**Note : Q.NO.1 is compulsory. Attempt one question from each unit.**

- Q1 **Attempt any ten questions :-** (2x10=20)
- (a) What is Common Type System (CTS) and Common Language Infrastructure (CLI) briefly explain?
  - (b) What is JIT compiler? Explain all the types of it?
  - (c) What is namespace? Explain the use of any five namespaces?
  - (d) What is managed code and unmanaged code with diagram?
  - (e) What is XML briefly explain the use of it?
  - (f) Write some differences between value type and reference type?
  - (g) What is sealed and abstract class? Explain with an example.
  - (h) Explain the FUNC and Action delegates with an example.
  - (i) What is compile time and run time polymorphism explain with example?
  - (j) Write some difference between class library and console application project?
  - (k) How is garbage collection useful in c#.net?

### UNIT-I

- Q2 a) What is Mono for .net? How it provides the Portability environment to CIL and discuss all components of it? (5)
- b) Explain the .NET framework architecture and includes the features of it? (5)
- Q3 (a) Explain the execution model of common Language Runtime and write the advantages of it. (5)
- (b) What is an Assembly? Explain the types and use of assembly in detail? (5)

### UNIT-II

- Q4 (a) Explain all value type and reference type in C# with a common example and explain the type casting too? (5)
- (b) Explain the root base class and their methods with an example. (5)

- Q5 (a) Explain the given topics with an example of each? (5)  
(i) Method overloading.  
(ii) Inheritance  
(b) Develop a C# Program which explain the use of exception Handling. (5)

**UNIT-III**

- Q6 (a) Develop a C# Program which is having area of 5 different figures by using two different delegates. (5)  
(b) Why we use Interface in a C# program, how it is different from an Abstract class (5)  
Show the use of explicit Interface implementation with example.
- Q7 (a) Develop a Stack and Queue program with their operations using generic classes. (5)  
(b) Explain how creating application using WPF is better than windows form. (5)

**UNIT-IV**

- Q8 (a) How can we define and execute a query through LINQ. Briefly explain implicitly Typed local variables, give a proper example to explain it. (5)  
(b) Discuss the benefits of using data through LINQ to SQL in compare to ADO.net commands and highlight the important aspects for the C# programmer (5)
- Q9 (a) Develop a C# Program that uses order by to retrieve the values in an int array in descending order and make the square of it using LINQ. (5)  
(b) What are the fundamentals of ADO.NET? Explain with diagram. (5)

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