

(Please write your Exam Roll No.)

Exam Roll No. ....

## END TERM EXAMINATION

THIRD SEMESTER[MCA]DECEMBER-2012

PAPER CODE:MCA209

SUBJECT:C# Programming

Time:3 Hours

Maximum Marks:60

Note: Attempt five questions including Q.no 1 which is compulsory . Select one question from each unit.

Q1. Answer any ten questions of the following:

- (a) What is common type system? Explain role of CTS in .NET framework.
- (b) Differentiate between C# and Java.
- (c) What are namespaces? Mention any four namespaces used in the .net framework.
- (d) What is metadata? What does metadata contain?
- (e) Compare read only and constants in C#?
- (f) What is the use of static constructors in C#?
- (g) What is the purpose of finally block in exception handling?
- (h) Why do we need explicit implementation of interfaces?
- (i) What is stack collection in C# and mention t various methods associated with that?
- (j) What is XML and why do we need XML?
- (k) Briefly describe the special features of LINQ.
- (l) Define Lambda expression .Mention the two types of lambda Expressions.

### UNIT-I

Q2 (a) What are the major components of the .NET framework? (5)

(b)What is automatic memory management? Explain the process of garbage collection in .NET framework.(5)

Q3 (a) Explain the various steps involved in the compilation and execution of .NET application. (5)

(b) What are assemblies? What are the constituents of assemblies? (5)

## UNIT-II

**Q4 (a) Write a program to show the following output:- (5)**

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

**(b) Design a class to represent Bank account. Include the following data members and methods:-**

- (i) Name of the holder (ii) Account Number (iii) Type of account (iv) Balance account**
- (v) To assign initial values (vi) To deposit an amount**
- (vii) To withdraw the amount after checking the balance**
- (viii) Display all details of the holder**

**Write a C# program to show the working of the class members. (5)**

**Q5 (a) Difference between dispose and finalize methods. (3)**

**(b) What are the various ways of passing parameters to the method in C#? (3)**

**(c) Briefly explain about the need of nullable type and methods used in that. (4)**

## UNIT-III

**Q6 (a) Enumerate the steps involved in creating and using a delegate with the support of an example. (5)**

**(b) Does C# support multiple inheritances? If yes, write a program to show implementation. (5)**

**Q7 (a) What are the major differences between an abstract class and an interface? (4)**

**(b) Explain how creating application using WPF is better than forms? (4)**

**(c) What are the characteristics of a multicast delegate? (2)**

## UNIT-IV

**Q8 (a) Explain ADO.NET architecture. (5)**

**(b) What are extension methods and explain using an example? (5)**

**Q9 (a) Describe the benefits of LINQ on dataset. (4)**

**(b) Write a program to show the different quantifiers in LINQ. (4)**

**(c) What do you understand by the term implicitly typed variable? (2)**