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10MCA53

**Fifth Semester MCA Degree Examination, Dec.2014/Jan.2015**  
**Topics in Enterprise Architectures – II**

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions.**

- 1 a. What is .NET platform? Explain the building blocks of .NET and their responsibilities. (08 Marks)  
 b. List and explain CTS types. (05 Marks)  
 c. With a neat diagram, explain the workflow that takes place between the source code, .NET compiler and the execution engine. (07 Marks)
- 2 a. How to debug a C# application from the command line? List the command line flags used with the debugger. (05 Marks)  
 b. What are response files? Explain with example. (05 Marks)  
 c. What are method parameter modifiers? Demonstrate each with suitable function definitions and function calls. (10 Marks)
- 3 a. List and explain the functionality of object class methods. (06 Marks)  
 b. What is the difference between == and Equals()? Illustrate with an example. (04 Marks)  
 c. Write a note on string manipulation in C#. Explain atleast five methods of System.String class with example. (10 Marks)
- 4 a. What is inheritance? Distinguish between "is a" and "has a" relationships in C#. (08 Marks)  
 b. How would you enforce encapsulation using accessors and mutators? Explain with suitable code. (06 Marks)  
 c. Write a program to find the maximum element in each row of a jagged array. (06 Marks)
- 5 a. Write a C# program to implement stack. Throw and handle custom exception whenever there is overflow and underflow. (10 Marks)  
 b. What is garbage collection? How do you build finalizable objects? Explain the implementation of finalizable objects with example. (10 Marks)
- 6 a. What are interfaces? Why are they used in C# programming? Explain Cloneable and Comparable interfaces, with example. (10 Marks)  
 b. List and explain the classes of System.Collections namespace. (10 Marks)
- 7 a. What are delegates in C#? Explain with example. Differentiate between synchronous and asynchronous use of delegates. (10 Marks)  
 b. What is operator overloading? Illustrate the process of binary operator and unary operators, with suitable example. (10 Marks)
- 8 a. What is a .NET assembly? Explain shared and private assemblies, in detail. (10 Marks)  
 b. What is a strong name? How is a strong name assigned to an assembly? (06 Marks)  
 c. Compare COM binaries with .NET assemblies. (04 Marks)

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