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10CS/IS761

Seventh Semester B.E. Degree Examination, June/July 2017

**C# Programming and .NET**

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting at least TWO questions from each part.**

**PART – A**

- 1 a. What is an assembly? Explain each component of an assembly. Differentiate between single and multifile assembly. (08 Marks)  
b. Write a note on .NET namespace. (04 Marks)  
c. Explain the working of CLR with an neat diagram. (08 Marks)
- 2 a. Define C# preprocessor directive. Explain any three directive. (08 Marks)  
b. Explain how csc.exe command is used to built C# application on .NET. Explain any five flags with appropriate examples. (06 Marks)  
c. Explain the following with respect to C# program in command prompt.  
i) Generating Bug report ii) Compiling multiple source file. (06 Marks)
- 3 a. Explain the following types with an example with reference to C#. i) foreach ii) ref iii) params iv) verbatim v) enum. (10 Marks)  
b. Explain the Anatomy of simple C# program and variations in main method. (06 Marks)  
c. Explain boxing and unboxing with an example. (04 Marks)
- 4 a. Explain how encapsulation is enforced in C# with a small program for each method. (08 Marks)  
b. Explain the two different roles of 'this' keyword with an example. (06 Marks)  
c. Explain virtual and override keywords. (06 Marks)

**PART – B**

- 5 a. List and explain with code, core members of System.Exception type. (10 Marks)  
b. With an example, explain forcing a Garbage collection and the need for forcing Garbage collection. (05 Marks)  
c. Write a C# application to illustrate handling multiple exceptions. (05 Marks)
- 6 a. Explain the three different way of obtaining interface reference. (09 Marks)  
b. Explain the following interfaces and its Role i) I convertible ii) I comparable. (06 Marks)  
c. Explain how to achieve shallow and deep copy in C#. (05 Marks)
- 7 a. What are the main advantages of C# events? (05 Marks)  
b. What are delegates? Explain the members of System.Multicast delegates. Give a small program to implement multicasting. (10 Marks)  
c. Write a program in C# to sort and reverse an array of 5 elements using sort () and reverse () methods. (05 Marks)
- 8 Write short notes on :  
a. Cross language inheritance  
b. Object Generations  
c. Physical and logical view and assembly  
d. Building a multifile assembly. (20 Marks)

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