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10CS/IS761

Seventh Semester B.E. Degree Examination, Dec.2015/Jan.2016

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 are the building blocks of .Net? With neat diagram give the relationship between .Net runtime layer and base class library. (10 Marks)
b. Define an Assembly? Explain each component of an assembly. Differentiate between single file assembly and multiple file assembly. (10 Marks)
- 2 a. Explain how csc.exe command is used to build C# application on .Net Framework. Explain any 5 flags with appropriate example. (08 Marks)
b. Explain the following C# preprocessor directives
i) # Error ii) Conditional code compilation. (04 Marks)
c. What is a Command Line Debugger? List and explain any five command line flags recognized by Command Line Debugger. (08 Marks)
- 3 a. Explain with an example static keyword. When used with
i) Variable ii) Method iii) Constructor. (06 Marks)
b. With a neat example, explain what happens when reference types is passed by value and passed by reference? (08 Marks)
c. Explain Boxing and Unboxing with example. (06 Marks)
- 4 a. Explain two different roles of this keyword with example. (06 Marks)
b. Explain with example, Read-only properties and Write-only properties. (06 Marks)
c. What are the three pillars of object oriented programming in C#, Differentiate between "is a" Relationship and "has a" Relationship with appropriate examples. (08 Marks)

PART – B

- 5 a. What are bugs, errors and exception? List and explain with code, the core members of System. Exception type. (12 Marks)
b. What is meant by object life time? Explain Garbage Collection Optimization process in C#. (08 Marks)
- 6 a. Explain three different ways of obtaining interface references with neat examples. (10 Marks)
b. List and explain in detail the different System.Collections Interface types. (05 Marks)
c. Explain the class types of System.Collection. (05 Marks)
- 7 a. What is a delegate? Differentiate between Synchronous and Asynchronous delegate with example. (10 Marks)
b. Illustrate the use of Callback Interfaces with a C# program. (10 Marks)
- 8 a. Explain the two conceptual views of .Net Assembly, with a neat diagram. What are the benefits of this? (10 Marks)
b. Write short notes on : i) Cross Language Inheritance ii) Shared Assembly. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank space. Do not be treated as malpractice.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.