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Fifth Semester MCA Degree Examination, December 2010

Topics in Enterprise Architecture - II

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. With a neat diagram, explain the building blocks of .NET platform. What are the features of C#? (10 Marks)
 - b. Explain the functions of the .NET runtime (CLR). (08 Marks)
 - c. Why is it desirable to create multiple assembly instead of single file assembly? (02 Marks)
- 2
 - a. How can you build a C# application, using command line compiler (CSC.exe)? (07 Marks)
 - b. List the C# preprocessor directives, with description of each. (05 Marks)
 - c. Write a C# program to the row sum and column sum of a given matrix. (08 Marks)
- 3
 - a. Bring out the differences between value types and reference types. (08 Marks)
 - b. Give the differences between 'ref' parameters and 'out' parameters. Describe each of these, with examples. (06 Marks)
 - c. Write a C# program to swap two objects of person class. (06 Marks)
- 4
 - a. Explain overriding of ToString(), Equals(), GetHashCode() methods of system object. (08 Marks)
 - b. What are the public and internal types? Explain with examples and appropriate figure. (06 Marks)
 - c. Write a C# program on boxing, unboxing and bad unboxing. (06 Marks)
- 5
 - a. How is the containment or delegation model employed in C#? Explain with an example. (08 Marks)
 - b. Describe the terms bugs, errors and exceptions. Explain the TargetSite, StackTrace and HelpLink properties of system exception. (09 Marks)
 - c. Name the following :
 - i) To see the content of assembly
 - ii) .NET type of C# int
 - iii) MSCore.dll means (long form) (03 Marks)
- 6
 - a. Describe the number of techniques that can be used to test the interface support or obtaining interface references. (06 Marks)
 - b. Illustrate with an example, how shallow copy and deep copy of an object instance can be made, using the ICloneable interface. (08 Marks)
 - c. Write a C# program, which defines class Flight. The class Flight implements two interfaces namely IBirds and IPlane and the interface member of IBirds and IPlane is fly(), which displays some message. Write the usage class which exercises the above. (06 Marks)
- 7
 - a. Explain the synchronous and asynchronous delegates, with examples. (10 Marks)
 - b. Explain the use of 'checked' and 'unchecked' C# keyword, with relevant examples. (04 Marks)
 - c. Explain the overloading of equality and comparison operators in C#. (06 Marks)
- 8
 - a. Explain with figures, the two conceptual views of an assembly. (04 Marks)
 - b. What are the core benefits of .NET assembly? (10 Marks)
 - c. What is a strong name? How is a strong name assigned to an assembly? (06 Marks)

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