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10MCA53

Fifth Semester MCA Degree Examination, June/July 2018

Topics in Enterprise Architectures – II

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

1. a. Briefly discuss the state of affairs that eventually led to the •NET platform. What is the •NET solution and what C# brings to the table? (12 Marks)
b. List and explain the intrinsic CTS datatype and •NET Namespaces in C#. (08 Marks)
2. a. Explain the role of the following directives in C# with examples :
i) #region and #end region ii) #if and #endif iii) #line. (08 Marks)
b. Explain the various output options available with C# compiler and write a program to illustrate the usage of System.Environment class. (12 Marks)
3. a. List and explain method access modifiers and method parameter modifiers for the lather, given an example for each. (12 Marks)
b. What is the difference between System.String and System.Text.String builder? Explain the relevant code some of the features of the string builder class. (08 Marks)
4. a. Demonstrate with a program the use of virtual, override and new keywords. (08 Marks)
b. Explain the following :
i) Sealed classes ii) Read-only and write –only properties iii) Base keyword. (12 Marks)
5. a. Differentiate between bugs, errors and exceptions. Explain the contents of •NET exception handling with valid example code. Enunciate what is meant by the target site property, the stack trace property and the help link property System.Exception. (10 Marks)
b. Explain the garbage collection optimization process in C#. When do you override the virtual System.Object.Finalize() method? How do you implement it using destructors? Why do we avoid using destructors in C# application? (10 Marks)
6. a. Define interfaces in C#. How will you contrast interfaces with abstract base classes. What is the role of explicit casting, the “as” keyword, and the “is” keyword in obtaining interface references. Explain with relevant example code. (12 Marks)
b. Briefly explain the System-Collections namespace. Explain the interfaces of System-Collections and the class types of System-Collections. (08 Marks)
7. a. What are delegates? Explain a single cast and multicast delegates in C# with program demonstration. (12 Marks)
b. Describe the core benefits of using assemblies in C#. (08 Marks)
8. Explain the following :
a. Single file assembly and multi file assembly
b. Boxing and unboxing
c. Indexer in C#
d. Jagged array. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.