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13MCA53

Fifth Semester MCA Degree Examination, Aug./Spet. 2020
Programming using C# •NET

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, and what are the benefits of •NET framework. (10 Marks)
- b. Explain the function of the •NET runtime(CLR). (05 Marks)
- c. What are the new features introduced in •NET framework 4.0? (05 Marks)
- 2 a. Bring out the differences between value types and reference types. Explain boxing and un-boxing with example. (10 Marks)
- b. Explain the following operators with example :
 - i) Scope resolution (03 Marks)
 - ii) is and as operator (04 Marks)
 - iii) ?? (Null coalescing) operator. (03 Marks)
- 3 a. Explain the concept of static method, static field, static class and static constructor with suitable example. (10 Marks)
- b. What is the difference between a property and an indexer with example? (10 Marks)
- 4 a. What is encapsulation? What are the two ways of enforcing encapsulation? Give examples for both methods. (08 Marks)
- b. Explain override method using virtual and abstract method. (08 Marks)
- c. How do you prevent inheritance? Explain with an example. (04 Marks)
- 5 a. Explain single cast and multicast delegates in C#. (05 Marks)
- b. Describe the events in C#. (05 Marks)
- c. Differentiate between bugs, errors and exceptions. Explain •NET exception handling with valid example code. (10 Marks)
- 6 a. List the components of ADO•NET entity framework. (08 Marks)
- b. How to create a database connection using SQL server and odbc. (12 Marks)
- 7 a. What are the different stages of an ASP•NET web page? (10 Marks)
- b. Specify what are the validation controls available in ASP•NET. (10 Marks)
- 8 Explain the following in details :
 - a. Jagged array
 - b. Interfaces
 - c. Operator overloading
 - d. Pre-processor directives. (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.