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13MCA53

Fifth Semester MCA Degree Examination, Jan./Feb. 2021
Programming using C# and .NET

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

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.

- 1 a. What is .Net platform? Explain the major components of .Net and discuss their responsibilities. (10 Marks)
b. What is meant by managed code and unmanaged code with respect to .Net? Explain. (05 Marks)
c. Write a short note on Windows workflow foundation. (05 Marks)
- 2 a. Explain 'ref' and 'out' parameters with suitable examples. (06 Marks)
b. Explain different types of conversions supported by C# .Net. Give example for boxing and unboxing. (06 Marks)
c. List the C# preprocessor directives with description of each. (08 Marks)
- 3 a. What are namespaces? List and explain any four namespaces provided by .Net framework. (06 Marks)
b. What are indexers? Explain with code example. (08 Marks)
c. Explain the following: (i) Nested classes (ii) Partial classes (06 Marks)
- 4 a. What are the methods used to enforce encapsulation? Explain with code example. (10 Marks)
b. Explain the following with example:
(i) Runtime polymorphism
(ii) Implementation of interface (10 Marks)
- 5 a. Explain multicasting with delegates with code example. (08 Marks)
b. Write a program in C# to demonstrate exception handling in C#. (06 Marks)
c. Write short notes on:
(i) Checked and unchecked statements
(ii) Events and event handlers (06 Marks)
- 6 a. List and explain the major control class properties and methods. (05 Marks)
b. Explain event handling mechanism with a simple event driven GUI. (10 Marks)
c. List and explain major properties and events of CheckBox class. (05 Marks)
- 7 a. Describe the architecture of ADO.Net and explain the common ADO.Net objects. (12 Marks)
b. Write a note on Data Adapters available in .Net framework and give the code for creating a DataSet from DataAdapter. (08 Marks)
- 8 a. List and explain HttpSessionState properties. (05 Marks)
b. Write a short note on session tracking. (05 Marks)
c. Explain the multitier web application architecture with a neat diagram. (05 Marks)
d. What is validation? Write a note on validation controls in ASP.Net. (05 Marks)

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