



13MCA53

Fifth Semester MCA Degree Examination, July/August 2021
Programming Using C# .NET

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. What is .NET Framework? Explain the benefits of .NET framework. (06 Marks)
b. With a neat diagram, explain the architecture of .NET framework. (06 Marks)
c. Explain the different types in CTS. What are the junctions performed by the CTS? (08 Marks)
- 2 a. List and explain the different preprocessor directives available in C#. (05 Marks)
b. How reference types are categorized? Explain each type with suitable example. (10 Marks)
c. With suitable examples explain boxing and unboxing. (05 Marks)
- 3 a. Define Namespace. Explain the concept of creating and including the namespaces in your program. (06 Marks)
b. How to define Partial classes and methods? Illustrate with examples. (08 Marks)
c. Write a C# program to demonstrate the use of properties. (06 Marks)
- 4 a. What is inheritance? What are the different types of inheritance? Explain the use of sealed classes with suitable example. (10 Marks)
b. Explain the characteristics of Abstract classes and Abstract methods. (04 Marks)
c. What are Interfaces? Why are they used in C# programming? How to create an interface? Illustrate with example. (06 Marks)
- 5 a. What are delegates in C#? Explain the process of creating and using delegates. (10 Marks)
b. Write a C# program to find the sum of all elements present in a jagged array of 3 inner arrays. (06 Marks)
c. Explain the process of handling an exception. (04 Marks)
- 6 a. Describe the various class control properties and methods. (08 Marks)
b. Describe the different mouse events and event arguments in C#.NET. (08 Marks)
c. Write a short note on MDI. (04 Marks)
- 7 a. What is ADO.NET? What are the important features of ADO.NET? (04 Marks)
b. With a neat diagram, explain the architecture of ADO.NET. (10 Marks)
c. List the various Data Adapters available in a .NET framework. With an example explain how to create Data Set from Data Adapter. (06 Marks)
- 8 a. With a neat diagram, explain the architecture of a three-tier web-based application. (10 Marks)
b. Explain the commonly used web controls in designing a form. (06 Marks)
c. Write a short note on cookies. (04 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.