

# CBCS SCHEME

18MCA51

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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. Explain the benefits and architecture of •NET framework. (10 Marks)  
b. What are CTS types? Explain in brief. (05 Marks)  
c. What is assembly? Describe the information stored in assembly manifest. (05 Marks)
- 2 a. What is the difference between value types and reference types and also write the program for boxing and unboxing. (10 Marks)  
b. What is jagged array? Write a program in C# to read a jagged array and display the sum of all elements present in jagged array of 3 inner arrays. (10 Marks)
- 3 a. What are sealed classes and sealed methods in •NET? Explain with an example. (10 Marks)  
b. Discuss the different ways of enforcing encapsulation. Give examples for both the methods. (10 Marks)
- 4 a. Explain indexers with suitable example and also give difference between properties and indexers. (10 Marks)  
b. What are partial classes and partial methods in C#? Give an example program of each. (06 Marks)  
c. Explain array of objects with the help of a program. (04 Marks)
- 5 a. How delegates are used in C#? Discuss multicast and single cast delegators with examples. (10 Marks)  
b. Explain how custom exceptions will be created in C# with suitable example. (10 Marks)
- 6 a. Describe the architecture of ADO•NET with a neat diagram. (10 Marks)  
b. Explain the components of ADO•NET with an entity framework. (05 Marks)  
c. Explain data adapter for creating dataset with an example program. (05 Marks)
- 7 a. What is combobox control in windows applications? Explain the common properties used with combobox control. (10 Marks)  
b. Write a program for addition of two numbers from text boxes and display the result in form using button click event. (05 Marks)  
c. Explain the steps involved in creating MDI form. (05 Marks)
- 8 a. Explain WPF architecture with a neat diagram. (10 Marks)  
b. Write a note on : i) XAML in WPF ii) Markup extensions. (10 Marks)
- 9 a. Explain any two validation controls with example supported by ASP•NET. (10 Marks)  
b. Explain session tracking using cookies and HTTP session state. (10 Marks)
- 10 a. What is AJAX and why it is need? (08 Marks)  
b. Explain the controls from AJAX control toolkit. (12 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.