

CBCS SCHEME

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16/17MCA52

Fifth Semester MCA Degree Examination, June/July 2023

Programming using C# and .NET

Time: 3 hrs.

Max. Marks: 80

Note: Answer FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Write the architecture of .NET framework with necessary diagrams. (08 Marks)
- b. What is Common Language Runtime? Discuss the role of CLR in executing a program. (08 Marks)

OR

- 2 a. Define boxing and unboxing. Explain the same with an example program. (08 Marks)
- b. Define the following:
 - (i) CTS
 - (ii) Metadata and assemblies
 - (iii) Name Space
 - (iv) Scope of variables and its categories. (08 Marks)

Module-2

- 3 a. Define the following class and explain with program:
 - i) Partial class
 - ii) Sealed class. (08 Marks)
- b. Explain with example the method of implementing encapsulation using class properties and accessors and mutators. (08 Marks)

OR

- 4 a. Explain the characteristics of abstract classes and abstract methods. (05 Marks)
- b. List the difference between properties and indexers with example. (05 Marks)
- c. Write a program to add two complex number using operator overloading. (06 Marks)

Module-3

- 5 a. What is Delegate? Write a C# program to create and implement a delegate. (08 Marks)
- b. Define event. Explain the implementation of event with an example program. (08 Marks)

OR

- 6 a. What is exception? List any four common C# exceptions. (05 Marks)
- b. Write a C# program to implement nested try blocks. (05 Marks)
- c. How custom exceptions are handled in C#? Explain with an example program. (06 Marks)

Module-4

- 7 a. Illustrate working with following controls with a windows form application example:
 - i) CheckBox
 - ii) RadioButton
 - iii) GroupBox. (09 Marks)
- b. Explain different types of keyboard events. Demonstrate with coding some of the keyboard handling. (07 Marks)

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.

OR

- 8 a. Write a program for addition of two numbers from text boxes and display the result in the form using button click event. (04 Marks)
b. Explain WPF architecture. (08 Marks)
c. Write short notes on MDI windows. (04 Marks)

Module-5

- 9 a. Discuss in detail about multi-tier application architecture. (08 Marks)
b. Explain the session management in ASP.NET using controls. (08 Marks)
- 10 a. Explain the controls from AJAX control toolkit. (08 Marks)
b. Describe the different validation controls in ASP.NET. (08 Marks)

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