

CBCS SCHEME

20MCA42



Fourth Semester MCA Degree Examination, June/July 2023 Programming using C#

Max. Marks: 100

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

Module-1

- 1 a. With neat diagram, explain the work flow that takes place between .NET Source code, .NET Compiler and the execution engine. (10 Marks)
- b. Discuss between managed code and unmanaged code. (06 Marks)
- c. Explain the role of Common Type System. (04 Marks)

OR

- 2 a. What are namespaces? List and explain the purpose of any three namespaces. (10 Marks)
- b. Write short notes on:
 - (i) JIT compiler
 - (ii) Windows Communication Foundation (10 Marks)

Module-2

- 3 a. Explain how to create an array of objects of the class with the help of a C# program. (10 Marks)
- b. Explain the concept of static methods and static data members with suitable examples. (10 Marks)

OR

- 4 a. Write a C# program to explain accessor and mutator properties used in encapsulation. (10 Marks)
- b. Explain the following with example:
 - (i) Abstract class and abstract methods
 - (ii) Compile time and runtime polymorphism (10 Marks)

Module-3

- 5 a. What are delegates? Explain the concept of multicast delegate with an example. (10 Marks)
- b. Write a C# program to calculate square of numbers using delegates. (10 Marks)

OR

- 6 a. Write a C# program using try, catch, finally to explain any predefined exceptions. (10 Marks)
- b. Explain the properties and methods of Data Reader and Data Adapter Class. (10 Marks)

Module-4

- 7 a. Explain various keyboard events in C# windows applications. (10 Marks)
- b. Discuss the architecture of WPF with a neat diagram. (10 Marks)

OR

- 8 a. Explain the following:
(i) XAML definition and elements (10 Marks)
(ii) WPF Core Types (10 Marks)
- b. What is GUI? List and explain basic controls of GUI. (10 Marks)

Module-5

- 9 a. Explain the architecture of a three tier web based application with a neat diagram. (10 Marks)
- b. Write steps in session tracking with http session state using cookies. (10 Marks)

OR

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- 10 a. Explain the controls from AJAX control toolkit. (10 Marks)
- b. Explain different validation controls with suitable example supported by ASP.NET. (10 Marks)
