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18MCA51

## Fifth Semester MCA Degree Examination, July/August 2022 Programming using C# .Net

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. With a neat diagram, explain the .NET execution engine. (10 Marks)  
b. Write a short note on Windows Workflow Foundation. (05 Marks)  
c. Explain the benefits of .NET Framework. (05 Marks)

**OR**

- 2 a. Develop a C# program to boxing, unboxing and bad-boxing. List out the difference between value type and reference type. (10 Marks)  
b. What is an Assembly? Describe the information stored in an assembly. (06 Marks)  
c. Write a short note on namespace. (04 Marks)

### Module-2

- 3 a. Discuss the different ways of enforcing the encapsulation with examples for each. (10 Marks)  
b. Along with an example, explain "Partial" keyword importance. (05 Marks)  
c. Demonstrate the indexes with an example. (05 Marks)

**OR**

- 4 a. Discuss the concept of sealed class and sealed method suitable example. (08 Marks)  
b. List and explain the different types of access modifiers. (06 Marks)  
c. Develop a C# program to overload the + operators. (06 Marks)

### Module-3

- 5 a. Describe the four steps to create and use a delegate in your program with an example. (10 Marks)  
b. Explain how custom exceptions will be created in C# with suitable example. (10 Marks)

**OR**

- 6 a. Describe the architecture of ADO.NET with a neat diagram in detail. (10 Marks)  
b. Explain the procedure of getting connected to a database and running the following queries with relevant example:  
(i) Insert record to table.  
(ii) Delete records from a table. (10 Marks)

### Module-4

- 7 a. What is GUI? List and explain basic GUI controls of Window forms. (10 Marks)  
b. Write a C# program for addition of two numbers from text boxes display the result in form using button click event. (06 Marks)  
c. Write a short note on MDI window. (04 Marks)

OR

- 8 a. Discuss the WPF Architecture with a neat diagram. (10 Marks)  
b. Explain XAML elements with an example. (05 Marks)  
c. Explain markup extension classes in XAML. (05 Marks)

**Module-5**

- 9 a. Discuss the Multi-Tier application architecture of ASP.Net with a neat diagram. (10 Marks)  
b. Explain the session management in ASP.Net using controls. (10 Marks)

OR

- 10 a. Describe the different validation controls in ASP.NET. (10 Marks)  
b. Illustrate the controls from AJAX control toolkit. (10 Marks)

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