

Third Semester B.C.A.Degree Examination, March/April 2023
(CBCS NEP SCHEME)
(NBC 0220) C# and Dot Net Framework

Time : 2 Hours

Max. Marks : 60

Instructions to students:

1. The students should legibly write section number along with question numbers.
2. The answers without section number and question numbers will not be valued.
3. The question numbers should be legibly written within the margin only.

SECTION - I

I. Select the most appropriate answer from the options provided. (10x1=10)

I-1. Code which is not controlled by CLR is known as

- a) exception code b) unmanaged code c) managed code d) none

I-2. **g** option in command line debugger specifies

- a) continue till next break point b) exit the debugger
 c) display current break point d) None of the above

I-3. A static class can be used as base class

- a) Yes b) No c) May or may not be used as base class d) None

I-4. What is the output of the following code snippet?

```
using System;
class User {
    User(){
        Console . Write("Hi");
    }
    User(String user) : this()
    {
        Console.WriteLine("Hello {0}", user);
    }
    public static void Main(){
        User u = new User("Ramesh");
    }
}
```

- a) Hello Ramesh b) Syntax error c) Hi Hello Ramesh d) Runtime error

I-5. Problem with old error handling technique is lack of

- a) Dependency b) Performance c) Symmetry d) Optimization

I-6. Which namespace contains all other important .NET namespaces?

- a) System b) Object c) Windows d) Console

- 1-7. Expand MDI
- Many Document Interconnect
 - Multipurpose Document Interface
 - Many Document Interconnect
 - Multiple Document Interface
- 1-8. Among the following which is the special property of the CheckBox.
- Clicked
 - Selected
 - Checked
 - None
- 1-9. Which .NET DataProvider offers best performance when connected to SQL Server database?
- OLEDB Provider
 - ODBC Provider
 - SQL Server Data Provider
 - SQL Server .NET Data Provider
- 1-10. In ADO, data from one component to other is sent in binary format, where as in ADO.NET it is sent in _____
- Binary format only
 - Text Stream
 - XML format
 - None

SECTION - II

II. Answer/Write a short note on any FIVE of the following: (5x3=15)

- II-1. Briefly explain CLR activities during the compilation and execution flow of a simple C# program.
- II-2. Explain role of command line compiler. Explain any three output options available for building C# assembly using csc.exe
- II-3. Explain how the concept of polymorphism achieved using *virtual* and *override* keyword with suitable example. <https://www.kuvempuonline.com>
- II-4. Explain the Role of Application Roots in .NET.
- II-5. Write a C# program to demonstrate handling of multiple exceptions.
- II-6. Explain how to use *as* and *is* keywords with reference to interface with suitable example.
- II-7. Write a note on life cycle of Form.
- II-8. Write a note on two faces of ADO.NET.

SECTION - III

III. Answer any THREE questions from the following :

- III-1. Explain building blocks of .NET platform. (3x5=15)
- III-2.
 - With example show how to create Read only and Write only properties in C#.
 - Write a note on static class in C#
- III-3. Write a C# program to demonstrate handling of *IndexOutOfRangeException* exception. (3+2)

- III-4. Explain the concept of Object Generation with respect to Garbage Collection.
- III-5. Explain 3 types of ListBox controls. Write a C# program to demonstrate any one of them.

SECTION - IV

IV. Answer the following:

(2x10=20)

- IV-1. a) Explain the role of common intermediate language.
- IV-1. b) Explain any three string methods in C# with example.
- IV-1. c) With example show the difference between multi dimensional array and jagged array in C#. (5+3+2)

OR

- IV-1. a) Write a note on constructor overloading and constructor chaining with example.
- IV-1. b) Write a note on sealed class in C#.
- IV-1. c) Explain interface inheritance with example. (5+2+3)
- IV-2. a) Explain any 5 classes in System Collections namespace.
- IV-2. b) Write a C# program to demonstrate array of interface. (5+5)

OR

- IV-2. a) Describe any 3 properties and 3 events of Control class.
- IV-2. b) List the steps involved in database interaction using connected layer of ADO.NET. Write a C# code snippet to show how to print data in a database table using Connection and DataReader objects. (5+5)

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