

Professional Course (Odd) Examination, 2024

(CBCS)

(5th Semester)

BACHELOR OF COMPUTER APPLICATIONS

(GUI Programming)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(PART : A—OBJECTIVE)

(Marks : 25)

SECTION—I

(Marks : 15)

A. Tick (✓) the correct answer in the brackets provided : 1×10=10

1. What is the primary function of the Common Language Runtime (CLR) in the .NET framework?

(a) To provide a way to access data from different databases ()

(b) To manage the execution of .NET applications and provide services like garbage collection ()

(c) To handle user interface design and rendering ()

(d) To ensure compatibility between different .NET languages ()

2. Which operator in VB.NET is used for logical AND operation?
- (a) && () (b) & ()
(c) AND () (d) &&& ()
3. Which control is best suited for presenting a hierarchical list of items in VB.NET?
- (a) ListBox () (b) ComboBox ()
(c) TreeView () (d) ListView ()
4. Which dialog control is used to prompt the user to choose a location and filename to save a file?
- (a) FontDialog () (b) OpenFileDialog ()
(c) SaveFileDialog () (d) ColorDialog ()
5. What is the output of the following VB.NET code?
- ```
Dim x AS Integer = 5
If x > 10 Then
 Console.WriteLine("Greater")
Else
 Console.WriteLine("Lesser or Equal")
End If
```
- (a) Greater ( ) (b) Lesser or equal ( )  
(c) Error ( ) (d) No output ( )
6. What type of error occurs when a program runs into an issue that was not anticipated during coding, such as dividing by zero or accessing a null object?
- (a) Syntax error ( )  
(b) Logic error ( )  
(c) Runtime error ( )  
(d) Compilation error ( )
7. How do you define an interface in VB.NET?
- (a) Interface IMyInterface ( )  
(b) Class IMyInterface ( )  
(c) Module IMyInterface ( )  
(d) Abstract Class IMyInterface ( )

8. Which access modifier allows a class member to be accessible only within the same assembly but not from other assemblies?
- (a) Public ( ) (b) Private ( )  
(c) Protected ( ) (d) Friend ( )
9. Which of the following is **not** a component of ADO.NET?
- (a) DataSet ( ) (b) DataAdapter ( )  
(c) Command ( ) (d) DataLink ( )
10. Which control is commonly used in VB.NET for generating and displaying reports within a Windows Forms Application?
- (a) CrystalReportViewer ( ) (b) ReportViewer ( )  
(c) DataGridView ( ) (d) PrintDocument ( )

**B.** State whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark in the brackets provided : 1×5=5

1. VB.NET supports both implicit and explicit type conversion.  
( T / F )
2. In VB.NET, access keys are assigned to menu items using the '&' before a letter in the menu item's text.  
( T / F )
3. The Queue collection in VB.NET follows a Last-In, First-Out (LIFO) order.  
( T / F )
4. A class can implement multiple interfaces in VB.NET.  
( T / F )
5. The Command object in VB.NET can only execute SELECT SQL queries.  
( T / F )

SECTION—II

( Marks : 10 )

**C.** Answer the following questions in short : 2×5=10

1. What is MSIL?
2. Discuss methods and events.
3. What are collections in VB.NET?
4. What are constructor and destructor?
5. What is a datagrid?

**( PART : B—DESCRIPTIVE )**

( Marks : 50 )

**D.** Answer the following questions : 10×5=50

1. Explain the key components of the .NET architecture and their roles.

**OR**

Explain any five arithmetic and logical operators with example.

2. What is a form? Discuss eight controls with their properties in a form.

**OR**

Explain five types of dialog boxes.

3. What is an array? Give example program on single-dimensional array.

**OR**

Explain passing by value and passing by reference with example programs.

4. What is a class? Explain methods and properties with examples.

**OR**

What is access modifier? What are the different types of access modifier?

5. What is ADO.NET? Explain the architecture of ADO.NET.

**OR**

What is dataset? What are the different components of dataset?

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