

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BCA DEGREE EXAMINATION MAY 2026
(Fourth Semester)

Branch- **COMPUTER APPLICATIONS**

DISTRIBUTED TECHNOLOGIES

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which component of the .NET Framework is responsible for executing programs and providing services such as memory management and security? a) .NET Class Library b) Common Language Runtime (CLR) c) Visual Studio .NET d) ASP.NET	K1	CO1
	2	In ASP.NET, variables declared inside a function are accessible only within that function. This refers to which type of scope? a) Global Scope b) Local Scope c) Block Scope d) Public Scope	K2	CO1
2	3	Which of the following is a reference type in .NET? a) int b) float c) string d) bool	K1	CO1
	4	In ASP.NET, what is the purpose of the Global.asax file? a) To store database connection strings b) To handle application-level events like start, end, and errors c) To define CSS styles for web pages d) To compile C# code into assemblies	K2	CO1
3	5	Which of the following is used to design web forms visually in Visual Studio .NET? a) Code Editor b) Web Form Designer c) Global.asax d) IIS Manager	K1	CO2
	6	In ASP.NET, the AdRotator control is primarily used to: a) Validate user input b) Display rotating advertisements from a specified file c) Format calendar dates d) Compile C# code into assemblies	K2	CO2
4	7	Which function in VB.NET is used to display a simple message box to the user? a) InputBox() b) MsgBox() c) ListBox() d) Timer()	K1	CO3
	8	In VB.NET, the ListBox control is primarily used to: a) Display images b) Allow users to select one or more items from a list c) Show numeric input only d) Control the flow of a timer	K2	CO3
5	9	Which ADO.NET object is used to read data forward-only and read-only from a data source? a) DataSet b) DataReader c) DataTable d) DataAdapter	K1	CO5
	10	In ADO.NET, a Typed Dataset is primarily used to: a) Execute SQL commands on the database b) Provide a strongly-typed, design-time representation of data c) Bind data to a TextBox control only d) Encrypt database connections	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the role of the .NET Class Library in application development.	K2	CO1
	(OR)			
	11.b.	Illustrate the concepts of loop structures with example.		
2	12.a.	Explain the difference between value types and reference types in .NET with suitable examples.	K2	CO2
	(OR)			
	12.b.	Describe the role of namespaces in organizing classes and preventing naming conflicts in ASP.NET applications.		
3	13.a.	Demonstrate how to use the Calendar Control in VB.NET to restrict user selection to future dates only.	K3	CO2
	(OR)			
	13.b.	Write a simple example using regular expressions to validate an email address in a customer form.		
4	14.a.	Demonstrate how to use the InputBox() function in VB.NET to take user input and display it using MsgBox().	K3	CO3
	(OR)			
	14.b.	Explain how a CheckBox control can be used in a form to allow multiple selections, and that checks which options the user selected.		
5	15.a.	Demonstrate how to connect to a SQL Server database using ADO.NET and read data into a DataSet	K3	CO4
	(OR)			
	15.b.	Explain how to bind a Typed Dataset to a Web Forms Data Grid.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Describe the structure of a .NET program, including the roles of the Common Language Runtime (CLR), .NET Class Library, and Visual Studio .NET.	K2	CO1
2	17	Describe the steps to set up ASP.NET with IIS, and explain how an ASP.NET application is configured and executed?	K2	CO2
3	18	Design a validated customer form in ASP.NET using Visual Studio .NET.	K3	CO3
4	19	Design a VB.NET form that incorporates the following controls: ListBox, ComboBox, CheckBox, and ProgressBar.	K3	CO3
5	20	Create a VB.NET application that uses a Typed Dataset to fetch product data from a SQL Server database and display it in a Web Forms Data Grid.	K3	CO5