

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION May 2026
(Fourth Semester)

Branch - COMPUTER SCIENCE

.NET PROGRAMMING

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 programming languages are supported by the .NET Framework? a) Only C++ (b) Java and C# (c) C#, VB.NET, F# (d) JavaScript and Python	K1	CO1
	2	Which of the following best explains the main function of the Common Language Runtime (CLR) in .NET? (a) It provides a text editor for writing .NET code (b) It compiles programs into machine-level code and manages execution (c) It is used only for designing graphical user interfaces (d) It stores data permanently in databases	K2	CO1
2	3	What is the default value of elements in an integer array in C#? (a) 1 (b) -1 (c) 0 (d) null	K1	CO2
	4	Which of the following explains why a catch block cannot be used alone in exception handling? (a) Because it must always be followed by a class block (b) Because exception handling requires at least a try block before catch (c) Because it can only be used inside the main method (d) Because catch does not handle errors	K2	CO2
3	5	Which name space contains classes for input and output in C#? (a) System.Data (b) System. IO (c) System.Net (d) System.Threading	K1	CO3
	6	Which method is used to make a thread wait until it receives a signal (pulse) from another thread? (a) Sleep() (b) Abort() (c) Wait() (d) Suspend()	K2	CO3
4	7	Which section in Visual Studio allows you to write and edit your code? (a) Toolbox (b) Output Window (c) Document Window (d) Start Page	K1	CO4
	8	Which type of file in ASP.NET explains how server controls and page layout are defined? (a) .exe file (b) .aspx file (c) .config file (d) .dll file	K2	CO4
5	9	Which ASP.NET control is used to ensure that a user does not leave a required field empty? (a) CompareValidator (b) RangeValidator (c) RequiredFieldValidator (d) RegularExpressionValidator	K1	CO5
	10	Which property in ASP.NET explains how a control is linked to a data source field? (a) CommandName (b) DataSource (c) DataField (d) ID	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 Common Type System (CTS) in .NET and discuss its significance with suitable examples.	K2	CO1
		(OR)		
	11.b.	Summarize the role of the Common Language Runtime (CLR) in .NET.		
2	12.a.	Explain the logic used to count vowels and consonants in a given string with a suitable example.	K2	CO2
		(OR)		
	12.b.	Illustrate the concept of multiple catch blocks in C# and explain their purpose with an example.		
3	13.a.	Apply the concept of streams in C# to write a program that reads text from a file and writes it into another file.	K3	CO3
		(OR)		
	13.b.	Construct a C# program to demonstrate multithreading by creating and starting a thread using the Thread class.		
4	14.a.	Build steps to create your first ASP.NET Web Site using Visual Studio and show how the required tools are applied.	K3	CO4
		(OR)		
	14.b.	Develop sample projects in Visual Studio to show the differences between ASP.NET Web Application and ASP.NET Web Site templates.		
5	15.a.	Analyze the features of the GridView control in ASP.NET and evaluate how binding it with a database using SqlDataSource improves data management.	K4	CO5
		(OR)		
	15.b.	Examine the role of the web.config file in ASP.NET and analyze how storing and retrieving connection strings from it enhances application security and configuration management.		

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	Explain the architecture of the .NET Framework with the help of a simple diagram, highlighting its main components.	K2	CO1
2	17	Explain the logic used to read an integer array and determine the frequency of each element, with a suitable example.	K2	CO2
3	18	Apply the concept of lambda expressions in C# by writing a program that uses a delegate with a lambda expression.	K3	CO3
4	19	Analyze the role of different ASP.NET controls in developing a web application and evaluate how they contribute to functionality and user interaction.	K4	CO4
5	20	Design and develop a Student Registration Form in ASP.NET using validation controls, justifying the choice of controls used for data accuracy.	K5	CO5