

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2026
(Second Semester)
Branch – COMPUTER TECHNOLOGY

PROGRAMMING IN C++

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	Choose the best feature of C++ programming language. (i) OOP (ii) Procedural (iii) Assembly (iv) Machine level	K1	CO1
	2	Which statement correctly uses scope resolution operator? (i) cout << x::; (ii) cout << ::x; (iii) cout << :x: (iv) cout << x::global;	K2	CO1
2	3	Find the invalid function type in C++? (i) Inline (ii) Static (iii) Virtual (iv) External	K1	CO2
	4	Function overloading is based on _____ (i) Number of arguments (ii) Return type (iii) Type of arguments (iv) Function name only	K2	CO2
3	5	Which of the following is correct about arrays? (i) Stores multiple values of same type (ii) Stores different data types (iii) Dynamic size only (iv) Pointer type only	K1	CO3
	6	Select the operator used for pointer declaration? (i) & (ii) * (iii) :: (iv) ->	K2	CO3
4	7	Which method is used for dynamic memory allocation? (i) new (ii) delete (iii) malloc (iv) alloc	K1	CO4
	8	Identify a valid file opening mode in C++. (i) ios::app (ii) ios::read (iii) ios::open (iv) ios::run	K2	CO4
5	9	Templates in C++ are used for _____ (i) Error handling (ii) File handling (iii) Memory allocation (iv) Generic Programme	K1	CO5
	10	Multiple catch blocks are designed to handle. (i) multiple exception types (ii) single error (iii) compilation errors (iv) logical errors	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.	Apply OOPs concepts to analyze the advantages and its applications of C++.	K3	CO1
		(OR)		
	11.b.	Develop a C++ program that demonstrates formatted input and output operations.		
2	12.a.	Utilize function overloading concept and explain its precautions steps with suitable example.	K3	CO2
		(OR)		
	12.b.	Identify and explain how constructors are automatically invoked during object creation.		
3	13.a.	Interpret the concept of overloading and explain the rules of operator overloading with example.	K5	CO3
		(OR)		
	13.b.	Evaluate the pointer type pointer to pointer and their applications in C++ programs.		
4	14.a.	Justify the use of virtual functions for achieving polymorphism. Explain its rules.	K5	CO4
		(OR)		
	14.b.	Interpret the file handling operations using file stream classes and file opening modes.		
5	15.a.	Discuss the role of templates in generic programming with example.	K6	CO5
		(OR)		
	15.b.	Develop a program to handle string objects, including comparison and exchange of strings.		

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	Build a C++ program that demonstrates the use of the scope resolution operator.	K3	CO1
2	17	Construct a C++ program using static data members and member functions and explain.	K3	CO2
3	18	Interpret the Inheritance and its types based on implementation and behavior.	K5	CO3
4	19	Compare new and delete operators for dynamic memory allocation with example.	K5	CO4
5	20	Design and implement exception handling using try, throw, and catch blocks.	K6	CO5