

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION DECEMBER 2025
(Second Semester)**

Common to Branches - INFORMATION TECHNOLOGY & 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	Object-Oriented Programming mainly focuses on: a) Functions b) Data c) Algorithms d) Machine code	K1	CO1
	2	Which of the following is an advantage of OOP? a) Increases execution time b) Reusability of code c) Reduces code readability d) Depends only on functions	K2	CO1
2	3	Which function is called automatically when an object is created? a) Destructor b) Constructor c) Friend function d) Inline function	K1	CO2
	4	Static member variables in C++: a) Have only local scope b) Are shared by all objects of the class c) Can only be used inside constructors d) Cannot be initialized	K2	CO2
3	5	Overloading unary operators usually requires: a) One operand b) Two operands c) Three operands d) No operand	K1	CO3
	6	Which of the following is true for operator overloading? a) Return type can change function signature b) We cannot overload relational operators c) Only existing operators can be overloaded d) New operators can be overload	K2	CO3
4	7	Which operator is used to release dynamically allocated memory? a) free b) release c) delete d) destroy	K1	CO4
	8	Which function type supports run-time polymorphism? a) Normal function b) Virtual function c) Inline function d) Friend function	K2	CO4
5	9	Function templates are used to: a) Define generic functions b) Replace friend functions c) Define macros d) Avoid recursion	K1	CO5
	10	Multiple catch statements are executed when: a) Exception is thrown multiple times b) One exception matches multiple catches c) Only one matching catch executes d) None of the above	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.	List and explain the key concepts of Object-Oriented Programming.	K1	CO1
		(OR)		
	11.b.	Describe the predefined streams available in C++.		
2	12.a.	Define inline functions with examples.	K2	CO2
		(OR)		
	12.b.	Write a note on copy constructors with example.		
3	13.a.	Which operators cannot be overloaded? Why?	K3	CO3
		(OR)		
	13.b.	Discuss the declaration and applications of an array of pointers.		
4	14.a.	What are virtual functions? Explain with examples.	K3	CO4
		(OR)		
	14.b.	Explain the working of new and delete operators in C++.		
5	15.a.	Explain the difference between templates and macros.	K4	CO5
		(OR)		
	15.b.	Write a C++ program that takes two strings from the user, compares them, and prints whether they are equal, or which one is greater.		

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	How C++ is more secure compared to C in terms of data handling?	K4	CO1
2	17	State the principles of function overloading with example and mention its precautions.	K3	CO2
3	18	Give a brief description about inheritance and its types.	K1	CO3
4	19	What are the steps for performing file operations? Explain with examples.	K2	CO4
5	20	Define exception handling and provide an example that demonstrates the use of multiple catch statements to handle different types of exceptions.	K3	CO5

Z-Z-Z END