

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

Branch - MATHEMATICS

C++ 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	C++ is mainly used for which type of programming? a) Object-Oriented Programming b) Assembly Programming c) Machine Programming d) None of these	K1	CO1
	2	Which of the following is a key advantage of using Object-Oriented Programming in C++? a) Faster compilation time b) Code reusability through classes and objects c) No need for functions d) Direct execution without compiler	K2	CO1
2	3	Which one is a C++ keyword? a) book b) int c) data d) value	K1	CO2
	4	What is the use of the scope resolution operator :: ? a) To end a program b) To call functions outside a class or namespace c) To increase numbers d) To create variables	K2	CO2
3	5	Which feature of C++ allows defining multiple functions with the same name but different parameter lists? a) Function overloading b) Virtual functions c) Inline functions d) Friend functions	K1	CO3
	6	Why do we use inline functions in C++? a) To increase code length b) To reduce function call overhead and make program faster c) To delete objects d) To create classes	K2	CO3
4	7	Which function has the same name as the class? a) Destructor b) Constructor c) Inline function d) Friend function	K1	CO4
	8	Why do we use destructors in C++? a) To overload operators b) To free memory and clean up when object is deleted c) To define multiple constructors d) To copy objects	K2	CO4
5	9	When a single derived class inherits from one base class, it is called: a) Single inheritance b) Multiple inheritance c) Hierarchical inheritance d) Hybrid inheritance	K1	CO5
	10	Which function is used in C++ to open a file for reading or writing? a) read() b) open() c) start() d) begin()	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.	Outline the structure of C++ program.	K2	CO1
		(OR)		
	11.b.	Rephrase the concept of abstraction and encapsulation.		
2	12.a.	Experiment with basic data types of C++.	K3	CO2
		(OR)		
	12.b.	Make use of the derived data types of C++ and explain with examples.		
3	13.a.	Apply and explain class with an example.	K3	CO3
		(OR)		
	13.b.	Construct and explain static member function with an example.		
4	14.a.	Inspect the concept of constructors with an example.	K4	CO4
		(OR)		
	14.b.	Analyse manipulation of string using operators with examples.		
5	15.a.	Inspect opening and closing of files in C++ with examples..	K4	CO5
		(OR)		
	15.b.	Compare and contrast the classes used in file stream operations		

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	Dissect the basic concepts of Object Oriented Programming.	K4	CO1
2	17	Analyse the control structures in C++ with examples.	K4	CO2
3	18	Inspect function overloading with an example.	K4	CO3
4	19	Infer overloading binary operators in C++ with examples.	K4	CO4
5	20	Compare single and multi level inheritance in C++ with examples.	K4	CO5

Z-Z-Z END