PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc (SS) DEGREE EXAMINATION DECEMBER 2025
(Second Semester)

Branch – SOFTWARE SYSTEMS (Five Years Integrated)

OBJECT ORIENTED PROGRAMMING WITH 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	C++ Language developed at _____ ? a) AT & T's Bell Laboratories of USA in 1972 b) AT & T's Bell Laboratories of USA in 1979 c) Cambridge University in 1972 d) Sun Microsystems in 1973	K1	CO1
	2	Which of the following is the correct difference between cin and scanf()? a) cin is used for reading whereas scanf() is used for printing input b) scanf() is a stream object whereas cin is a function c) cin is a stream object whereas scanf() is a function d) cin is used for printing whereas scanf() is used for reading input	K2	CO1
2	3	Which is more effective while calling the functions? a) call by reference b) call by value c) call by pointer d) call by object	K1	CO2
	4	What is friend member functions in C++? a) Non-member functions which have access to all the members of a class b) Member function which doesn't have access to private members c) Member function which can modify any data of a class d) Member function which can access all the members of a class	K2	CO2
3	5	What happens when objects s1 and s2 are added? string s1 = "Hello"; string s2 = "World"; string s3 = (s1+s2).substr(5); a) Error because s1+s2 will result into string and no string has substr() function b) Run-time error c) The statements runs perfectly d) Segmentation fault as two string cannot be added in C++	K1	CO3
	6	If the object is passed by value to a copy constructor? a) Only public members will be accessible to be copied b) That will work normally c) Compiler will give out of memory error d) Data stored in data members won't be accessible	K2	CO3
4	7	Which feature of OOP indicates code reusability? a) Abstraction b) Polymorphism c) Encapsulation d) Inheritance	K1	CO4
	8	Single level inheritance supports _____ inheritance. a) Runtime b) Compile time c) Multiple inheritance d) Language independency	K2	CO4
5	9	If a base class is inherited from another class and then one class derives it, which inheritance is shown? a) Multiple b) Multi-level c) Hierarchical d) Single	K1	CO5
	10	How run-time polymorphisms are implemented in C++? a) Using Inheritance b) Using Virtual functions c) Using Templates d) Using Inheritance and Virtual functions	K2	CO5

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.	Classify the Basic Datatypes in C++.	K2	CO1
		(OR)		
	11.b.	Explain about different types of Operators in C++.		
2	12.a.	Illustrate the Array of Objects in C++.	K3	CO4
		(OR)		
	12.b.	Determine Function Overloading and Write down the Program.		
3	13.a.	Distinguish with Multiple Constructor in a Class.	K4	CO3
		(OR)		
	13.b.	Examine the Concept of Operator Overloading and Write a Program for Unary and Binary Operators in C++.		
4	14.a.	Justify Constructor in derived Classes.	K5	CO2
		(OR)		
	14.b.	Summarize about Virtual base Classes with suitable program.		
5	15.a.	Generalize the Concept of Exception Handling and How to Avoid it?	K6	CO5
		(OR)		
	15.b.	Categorize about i) Stream I/O ii) File Pointer		

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 basic Concepts of OOPS in Detail.	K1	CO1
2	17	Write a Program to demonstrate Friend function in C++.	K3	CO2
3	18	Characterize the concept of Parameterized, Copy Constructor with Suitable Program.	K4	CO3
4	19	Visualize the Various types of Inheritance.	K2	CO4
5	20	Conclude the Basics of Polymorphism, Types, Compile and Run Time Polymorphism.	K5	CO5

Z-Z-Z   END