

INDIRA UNIVERSITY, PUNE

SCHOOL OF INFORMATION TECHNOLOGY- BSC AIML

Backlog Examination (2025 Pattern) April/ May – 2026 - Semester – I

Subject Name: Object Oriented concepts and
Programming using C++

Max. Marks:25**Subject Code:** 25AML101T**Time:** 1:30 Hrs.**Instructions**

- All Questions are Compulsory.

CO #	Cognitive Ability	Course Outcome
CO1	Remember	Recall fundamental programming and object-oriented concepts to establish a strong theoretical foundation for software development.
CO3	Apply	Develop modular and efficient programs by applying object-oriented programming techniques in real-world scenarios.
CO5	Evaluate	Assess and validate programming solutions using appropriate logic, debugging strategies, and error-handling mechanisms.

Q1.	Attempt any 5 out of 7. (1 mark each) a) Define abstraction. b) Write one looping statement used in C++. c) Which header file is required to use strings in C++? d) Define a friend function. e) What is type casting? f) What is an abstract base class? g) What is a template in C++?	(5 Marks)	CO1
Q2.	Attempt any 2 out of 4. (5 marks each) a) Develop a C++ program using an if-else statement to check whether a number is positive, negative, or zero. b) Build a class Book with data members (title, author, price) and display them using a member function.	(10 Marks)	CO3

	c) Apply the concept of operator overloading for a C++ program to overload the unary minus (-) operator for a class. d) Demonstrate single inheritance using base and derived classes using C++ program.	
Q.3.	Attempt all questions. (10 Marks) a) "Evaluate and justify the output:- (5 Marks) <pre>#include <iostream> using namespace std; void swapNum(int &a, int &b) { int temp = a; a = b; b = temp; } int main() { int x = 2, y = 5; swapNum(x, y); cout << x << " " << y; }</pre> b) "Evaluate the advantages and disadvantages of multiple inheritance. Support your evaluation with an example scenario where multiple inheritance is justified." (5 Marks) OR	CO5
Q.3.	Evaluate the purpose of break and continue statements inside loops. When should they be used and why? (10 Marks)	CO5
