

CBCS SCHEME

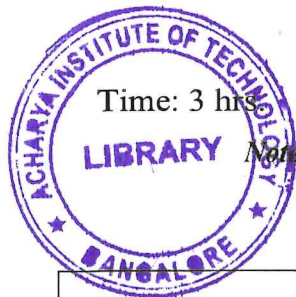
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BPLCK205D

Second Semester B.E./B.Tech. Degree Examination, June/July 2026

Introduction to C++ Programming



Time: 3 hrs

Max. Marks: 100

LIBRARY

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Why is C++ called an object-oriented programming language? Describe the structure of a C++ program. Give an example C++ program with syntax.	10	L2	CO1
	b.	What is an object and class in C++? Describe how methods are defined and invoked in C++. How messages are passed between objects using methods.	10	L2	CO1
OR					
Q.2	a.	Explain how encapsulations and abstraction is implemented in C++? Give examples and explain.	10	L1	CO1
	b.	Define Polymorphism in object-oriented programming. What is method overriding? Also differentiate between single and multiple inheritance with diagram.	10	L2	CO1
Module – 2					
Q.3	a.	List any ten keywords used in C++ and explain them. What is the significance of the new and delete keywords.	10	L2	CO2
	b.	What is the scope resolution operator in C++? Examine the use of the scope resolution operator in inheritance scenarios to access base class members.	10	L2	CO2
OR					
Q.4	a.	Define an inline function in C++. Differentiate between a regular function and an inline function. Explain inline function with an example.	10	L2	CO2
	b.	Explain default arguments and function overloading with examples.	10	L1	CO2
Module – 3					
Q.5	a.	Define Constructor. Give example. Explain derived class constructors in detail with examples.	10	L1	CO3
	b.	With examples, explain destructors and its uses in C++. Explain derived classes with examples.	10	L2	CO3

OR

Q.6	a.	Compare and contrast single and multiple inheritance in terms of design complexity and maintainability.	10	L4	CO3
	b.	Explain with examples : i) Hierarchical inheritance ii) Hybrid inheritance.	5 5	L1	CO3

Module – 4

Q.7	a.	Design a class hierarchy for an academic management system with classes like Person, Student, Teacher, Course, etc. Use appropriate relationships.	10	L6	CO4
	b.	Write a C++ program to read a text file line byline and display its content on the screen. Also, list the file opening modes supported in C++.	10	L2	CO4

OR

Q.8	a.	Explain Binary File handling with explain in detail.	10	L1	CO4
	b.	Explain the difference between text files and binary files in C++.	10	L1	CO4

Module – 5

Q.9	a.	Define Exception. What is exception handling give example? How Exceptions are handled in C++ give examples. Give benefits of Exception handling.	10	L1	CO4
	b.	Write a C++ program using try and catch to handle division by zero. Justify, can we have multiple catch blocks for a single try block? Explain.	10	L3	CO4

OR

Q.10	a.	What is the purpose of the throw statement in C++? Give its syntax. Can we throw an object in C++? Give an example using a user-defined class.	10	L2	CO4
	b.	Name any four predefined exceptions in the C++ standard library. Explain the difference between user-defined and pre-defined exceptions in C++.	10	L2	CO4
