

CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

BPLCK205D

Second Semester B.E./B.Tech. Degree Examination, June/July 2025

Introduction to C++ Programming

Time: 3 hrs.

Max. Marks: 100

*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.	What is object oriented programming? Explain the structure of C++ program.	10	L2	CO1
	b.	Write a C++ program to calculate factorial of a given number.	10	L3	CO1
OR					
Q.2	a.	Define the following terminologies with examples. i) Objects ii) Classes iii) Abstraction iv) Inheritance v) Encapsulation.	10	L2	CO1
	b.	Define polymorphism. Explain the types of polymorphism with a suitable example.	10	L2	CO1
Module – 2					
Q.3	a.	Write short notes on : i) Scope resolution operator ii) Function over loading.	10	L2	CO2
	b.	Write a C++ program to check the given number is palindrome or not.	10	L3	CO2
OR					
Q.4	a.	What are Inline functions? Explain the working of Inline functions with an example.	10	L2	CO2
	b.	Write a C++ program to swap values by writing a function that uses call by reference technique.	10	L3	CO2
Module – 3					
Q.5	a.	Define Constructor. Explain how constructors are declared and defined along with its characteristics.	10	L2	CO3
	b.	What is multiple inheritance? Write a program to demonstrate how can the ambiguity that could arise sometimes in multiple inheritance be resolved?	10	L3	CO3
OR					
Q.6	a.	Describe the importance of destructor. Explain its use with a program.	10	L3	CO3
	b.	Create a class named shape with a function that prints "This is a shape". Create another class named polygon inheriting the shape class with the same function that prints "Polygon is a shape". Create two other classes named rectangle and triangle having the same function which prints "Rectangle is a polygon" and "Triangle is a polygon" respectively. Again, make another class named square having the same function which prints "Square is a rectangle". Now, try calling the function by the objects of these classes.	10	L3	CO3

Module – 4

Q.7	a.	With a neat diagram, discuss stream class hierarchy in C++.	10	L2	CO4
	b.	Write a C++ program to create a text file, check file created or not, if created it will write some text into the file and then read the text form the file.	10	L3	CO4

OR

Q.8	a.	Write the various functions used to open, close, and write data in text files.	10	L2	CO4
	b.	Write a C++ program to write and read time in/from binary file using fstream.	10	L3	CO4

Module – 5

Q.9	a.	Discuss exception handling mechanisms in C++.	10	L2	CO4
	b.	Write a function which throws a division by zero exception and catch it in catch block. Write a C++ program to demonstrate usage of try, catch and throw to handle exception.	10	L3	CO4

OR

Q.10	a.	Discuss catching multiple class types as exceptions and rethrowing an exception with examples.	10	L2	CO4
	b.	Write a C++ program function which handles array index out of bounds exception using C++.	10	L3	CO4
