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BPLCK105D

**First Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026**

## 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.	Define the following terms with an example. i) Object ii) Classes iii) Polymorphism iv) Abstraction v) Encapsulation.	10	L1	CO1
	b.	List and explain any FIVE characteristics of C++.	10	L3	CO1
<b>OR</b>					
Q.2	a.	Explain the structure of C++ program with syntax and example.	10	L1	CO1
	b.	Write a C++ program to sort the elements in ascending and descending order.	10	L2	CO1
<b>Module – 2</b>					
Q.3	a.	List and explain any FIVE expressions and their types.	10	L1	CO2
	b.	Write a C++ program to demonstrate function overloading for the following prototypes:  add (int a, int b) add (double a, double b)	10	L3	CO2
<b>OR</b>					
Q.4	a.	Explain scope resolution operation with an example.	5	L2	CO2
	b.	Explain Call by Reference with a programming example.	5	L2	CO2
	c.	Explain Inline functions with a programming example.	10	L2	CO2
<b>Module – 3</b>					
Q.5	a.	Explain single inheritance with syntax and programming example.	10	L2	CO3
	b.	Describe the syntax of multiple inheritances with a programming example.	10	L2	CO3

OR

Q.6	a.	Explain construction with syntax and suitable examples.	10	L2	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 in 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 object of each of these classes.	10	L3	CO3

Module – 4

Q.7	a.	Explain the method of read-write using get( ) and put( ) functions in Text files.	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 from the file.	10	L3	CO4

OR

Q.8	a.	With a neat diagram, explain Stream class hierarchy in C++.	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.	Define Exception. Explain mechanism of exception handling in C++ with syntax and programming example.	10	L2	CO4
	b.	Write a C++ program function which handles array of bounds exception using C++.	10	L3	CO4

OR

Q.10	a.	Discuss multiple catch statements with syntax and programming example.	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

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