



CBCS SCHEME - Make-Up Exam

BCS306B

Third Semester B.E/B.Tech. Degree Examination, June/July 2025 Object Oriented Programming with C++

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
1	a.	Define object oriented programming and explain the characteristics of object oriented languages and write general form of C++ program.	10	L1 L2	CO1
	b.	Explain the following with an example : i) Scope resolution operator ii) Friend function.	10	L2	CO1
OR					
2	a.	Describe how objects are passed to functions with an example.	10	L2 L3	CO1
	b.	What are constructors? Explain different types of constructors with an example.	10	L2	CO1
Module – 2					
3	a.	Develop a C++ program using classes to display student name, roll numbers, marks obtained in two subjects and total score of student.	10	L3	CO2
	b.	Illustrate the use of "this" pointer in C++ with relevant example.	5	L2	CO2
	c.	Explain with example, copy constructor.	5	L2	CO2
OR					
4	a.	Implement C++ program to sort the elements in ascending and descending order.	10	L3	CO2
	b.	Explain array of pointers to objects and accessing member functions using pointers.	10	L3	CO2
Module – 3					
5	a.	Discuss the overloading operator using keywords 'new' and 'delete' with an example.	10	L3	CO3
	b.	Develop a C++ program using operator overloading for overloading unary minus operator.	10	L3	CO3
OR					
6	a.	Develop a C++ program derive a class "Project Lead" from class "Person" and "Employee". Consider suitable data members and member functions for the classes.	10	L3	CO4
	b.	How constructors and destructors get executed for inheritance when there are more than one class and both base and derived classes contain constructors?	10	L3	CO4
Module – 4					
7	a.	Demonstrate the hierarchical nature of virtual functions with a suitable example program.	10	L2	CO4
	b.	Explain the difference between early and late binding with code example.	10	L3	CO4

OR

8	a.	Enumerate the capabilities of Templates.	5	L2	CO5
	b.	Discuss the generic class with an example program.	10	L2 L3	CO5
	c.	Examine the usage of type name and export keywords.	5	L2	CO5

Module – 5

9	a.	Develop a function which flows 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	CO5
	b.	Discuss catching all exceptions and rethrowing an exception with examples.	10	L2	CO5

OR

10	a.	Explain the following formatted I/O : i) Width () ii) Precision () iii) fill () iv) setf () v) unsetf ()	10	L2	CO6
	b.	Develop a C++ program to create a text file, check whether the file is created or not. If created, it will write some text into the file and then read the text from the file.	10	L3	CO6
