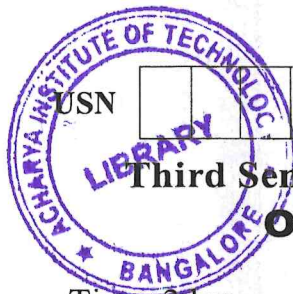


CBCS SCHEME



BCS306B

Third Semester B.E./B.Tech. Degree Examination, June/July 2026 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
Q.1	a.	Explain the general structure of a C++ program, with an example code.	7	L2	CO1
	b.	Develop a C++ program to swap two numbers using function, choose appropriate parameter passing techniques.	7	L3	CO1
	c.	Mention and explain the parameter passing techniques in C++.	6	L2	CO1
OR					
Q.2	a.	Develop a C++ program using class construct, to accept and display values of a student object, made up of the name, usn and marks of two subjects.	7	L3	CO1
	b.	Explain how dynamic memory can be allocated and deallocated in C++, with suitable code snippet.	7	L2	CO1
	c.	Explain the salient features of object oriented programming.	6	L2	CO1
Module – 2					
Q.3	a.	Explain the implicit pointer "this". Mention its uses with suitable code snippet.	7	L2	CO2
	b.	Write a note on pointer to objects.	7	L2	CO2
	c.	Develop a C++ program to find the largest of 'n' natural numbers.	6	L3	CO2
OR					
Q.4	a.	Mention and explain two constructors supported in C++.	7	L2	CO2
	b.	Define the following : i) Function overloading ii) Default arguments	7	L2	CO2
	c.	Develop a C++ program to find the largest of 'n' strings that are accepted and stored in an array.	6	L3	CO2
1 of 2					

Module – 3

Q.5	a.	Explain with syntax in how many ways operators are overloaded in C++.	7	L2	CO3
	b.	Develop a C++ program to overload operator + for class complex. Class complex is made up of real and imaginary values. Overloading + must increment real value by 1. Add accept() and display() functions to the class.	7	L3	CO3
	c.	Explain how post and pre increment operators are overloaded in C++.	6	L2	CO3

OR

Q.6	a.	Illustrate the use of access specifiers in inheritance, with suitable example.	7	L2	CO3
	b.	Develop a C++ program to depict multiple base class inheritance.	7	L3	CO3
	c.	Explain how constructors and destructors are executed in inheritance hierarchy.	6	L2	CO3

Module – 4

Q.7	a.	Explain how polymorphism can be implemented in C++.	7	L2	CO4
	b.	Explain virtual function usage and its significance in C++, with suitable concepts.	7	L2	CO4
	c.	Differentiate between Pure virtual function and Virtual function.	6	L2	CO4

OR

Q.8	a.	Explain with syntax how a generic function can be created in C++ with suitable code snippet.	7	L2	CO4
	b.	Explain with suitable example how a generic function can be explicitly overloaded.	7	L2	CO4
	c.	Explain with suitable example how a function template can be overloaded.	6	L2	CO4

Module – 5

Q.9	a.	Explain with syntax and example how exceptions can be handled in C++.	7	L2	CO5
	b.	Explain with suitable code how a class type exception can be caught and remedy can be provided for the same.	7	L3	CO5
	c.	Mention and explain different types of standard exceptions in C++.	6	L2	CO5

OR

Q.10	a.	Mention and explain bitmask enumeration fnt flags in C++.	7	L2	CO5
	b.	Mention the prototypes of self() and unsetf() methods in C++, explain how it can be used for setting and clearing the flags.	7	L2	CO5
	c.	Explain with suitable code snippets how a file can be opened in ifstream, ofstream and fstream classes of C++.	6	L2	CO5
