

**II B. Tech I Semester Supplementary Examinations, July - 2023**  
**OBJECT ORIENTED PROGRAMMING THROUGH C++**  
 (Com to CSE, IT)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions, each Question from each unit  
 All Questions carry **Equal** Marks

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UNIT-I

- 1 a) List the drawbacks of conventional programming. Explain how object oriented programming overcome them. [7M]  
 b) Mention the similarities and differences between C and C++ [7M]

Or

- 2 a) Explain the key concepts of Object Oriented Programming. [7M]  
 b) Briefly write about the evolution of C++. [7M]

UNIT-II

- 3 a) How will you destroy the objects initialized by the constructor in the program? [7M]  
 b) Write a C++ program, which illustrates the concept of Nested class. [7M]

Or

- 4 a) What is the use of a constructor? Explain default, parameterized and copy constructors with suitable examples. [7M]  
 b) Write a C++ program illustrating Exception overloading. [7M]

UNIT-III

- 5 Describe the three different inheritance behaviors achieved through the use of pure virtual, ordinary virtual and non-virtual functions. [14 M]

Or

- 6 a) Differentiate between hierarchical inheritance and hybrid inheritance with an example. [7M]  
 b) What is a virtual base class? Why it is important to make a class virtual? [7M]

UNIT-IV

- 7 a) What is polymorphism? How it is achieved at compile time and runtime? Explain both with the help of example. [7M]  
 b) Discuss in detail about virtual destructors. [7M]

Or

- 8 a) Write a C++ program that declare and use pointer to an object. [7M]  
 b) Describe the mechanism of creating virtual functions in C++ with an example. [7M]

UNIT-V

- 9 a) Explain the components of Standard Template Library (STL). [7M]  
 b) Write a C++ program that fills a vector with random numbers. [7M]

Or

- 10 a) Write a C++ program that erases all elements in a list using iterators. [7M]  
 b) Explain about different types of containers. [7M]