

II B. Tech I Semester Supplementary Examinations, Feb/March - 2022
OBJECT ORIENTED PROGRAMMING THROUGH C++
(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 75

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

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- 1 a) State the important features of object-oriented programming. [8M]  
b) Compare object-oriented programming with procedure-oriented programming. [7M]
- Or
- 2 a) Write a program for calculating the total marks and Grade of the 60 students in a class. [8M]  
b) State the use of static data member of a class. [7M]
- 3 a) Discuss with examples, the implications of deriving a class from an existing class by the 'public' and 'protected' access specifiers. [8M]  
b) Write a C++ program to overload area () and circumference () functions to calculate area of shapes like triangle, square, circle. [7M]
- Or
- 4 a) What is the use of a constructor? Explain default, parameterized and copy constructors with suitable examples. [7M]  
b) Write a program to overload == operator to compare two strings [8M]
- 5 a) Explain the use of this pointer. [7M]  
b) What are Abstract classes? Write a C++ program to demonstrate abstract class. [8M]
- Or
- 6 a) Explain use of friend function with the help of suitable example. [8M]  
b) Write C++ program to illustrate pointer object. [7M]
- 7 a) Demonstrate hybrid inheritance with the help of suitable example. [7M]  
b) How a pointer is declared and initialized? Give an overview of pointer arithmetic. [8M]
- Or
- 8 a) How a pointer is declared and initialized? Give an overview of pointer arithmetic. [7M]  
b) What is a virtual destructor? Explain with an example. [8M]
- 9 a) Write a C++ program for Generic Bubble sort. [8M]  
b) Write a C++ program to illustrate try, catch, and throw statements? [7M]
- Or
- 10 a) Explain Containers briefly. [7M]  
b) List and explain any five member functions from vectors and lists class in STL. [8M]