

Roll No. ....

Total Pages : 2

**BT-4/M-21**

**44003**

**OBJECT ORIENTED PROGRAMMING USING C++**

**Paper : IT-252E**

Time : Three Hours]

[Maximum Marks : 100

**Note :** Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

### **UNIT-I**

1. (a) Define object and classes? Differentiate between procedure oriented and object oriented programming.  
(b) Draw comparison between Overloading vs. Overriding. Give a brief note on overriding methods.  
(10+10=20)
2. (a) What is a Structure? Why we need structure definition? How to access members of Structures?  
(b) Define the 'this' pointer, with an example, indicate the steps involved in referring to members of the invoking object.  
(10+10=20)

### **UNIT-II**

3. Write the fundamentals of operator overloading. Draw comparison between operator functions as class members and friend functions. Write a program to overload binary operators.  
(20)

44003/00/KD/1605

[P.T.O.]

4. What is the ambiguity that arises in multiple inheritance? Discuss with examples, the implications of deriving a class from an existing class by the 'public' and 'protected' access specifiers. (20)

### UNIT-III

5. (a) Write a C++ program demonstrating use of the pure virtual function with the use of base and derived classes.  
(b) Write a note on dynamic binding. (10+10=20)
6. (a) What is sequential access file? How to read and update data in sequential access file?  
(b) Discuss about stream input, stream output, stream manipulators and stream error states. (10+10=20)

### UNIT-IV

7. (a) What are function templates? With an example, show how to overload template functions.  
(b) Write a detailed note on class template and non-type parameters. (10+10=20)
8. (a) What is a user defined exception? Write down the scenario where we require user defined exceptions?  
(b) Draw a comparison between.  
(i) Error and Exception.  
(ii) Exceptions and Inheritance. (10+10=20)
-