

Roll No. ....

Total No. of Pages : 2

**BT4/M06 8727**

**Object Oriented Programming Using C++**

**Paper-IT-252 E**

Time : Three Hours]

[Maximum Marks : 100

**Note** : – Attempt any **FIVE** questions, selecting at least **ONE** from each unit.

**UNIT-I**

1. (a) Differentiate between Procedure oriented and Object Oriented Programming. 8
- (b) Explain the following :
  - (i) Pre-processor Directives 7
  - (ii) Namespaces. 5
2. (a) What are static data members ? What is difference between static data members and simple data members of a Class ? Explain with example. 10
- (b) What is function overloading ? What is the process of function overloading ? Explain with example. 10

**UNIT-II**

3. (a) What is operator overloading ? What are the methods of overloading the operators in C++ ? Explain one method of operator overloading in C++ with example. 12
- (b) Write a program to overload '\*' operator. 8
4. (a) Write a program which implements the concept of Virtual base class. 12
- (b) What is the ambiguity problem in case of multiple inheritance ? How it can be removed ? 8



### UNIT-III

5. (a) What are virtual functions ? What are the requirements of virtual functions ? Explain with example. 12
- (b) What is the friend function ? Explain its advantages with examples. 8
6. (a) Explain the following :  
(i) put ( )  
(ii) get ( )  
(iii) getline ( )  
(iv) write ( ) 8
- (b) Write a program which reads a line of text and stores into file and then prints the file contents. 12

### UNIT-IV

7. (a) What are Class Templates and function Templates ? Give example of each. 12
- (b) Write a program which designs a template that performs multiplication of:  
(i) int type data  
(ii) float type data 8
8. Explain the following :  
(a) Exception handling  
(b) Inheritance  
(c) Data Abstraction and Encapsulation  
(d) Inline function. 5×4