MCA/M06
Object Oriented Systems and C++
MCA -205

Time : 3 Hours                                                                                           MM:50
Note:- Attempt Five questions in all, selecting at least One question from each unit.
## UNIT-I

1       Explain the following concepts:
        (a)     Abstract Class
        (b)     Ordering Classification
        (c )    Aggregation                                         4+3+3=10

2       What is object oriented methodology? What are its main advantages?      10

3       Distinguish between:-
        (a)     Object and class diagrams
        (b)     Static and dynamic OMT models                       5*2=10

## UNIT-II
4       Explain the following concepts with examples:-
        (a)     Functional model
        (b)     Levels of abstraction in functional model           5*2=10

5       Explain the following concepts for a dynamic model:-
        (a)     State diagram
        (b)     Scenarios
        (c )    Events                                              4+3+3=10

6       What are Object modeling techniques? Give examples.                     10

## UNIT-III

7(a)    What is a virtual function? What is their need? Give illustrative example.  5
  (b)   Differentiate between template class and class template.                5

8       Write a program in C++ to overload output operator '<<'                 10

9       What is a constructor? What are its advantages? How is the concept of constructor
        related to function overloading? Explain with example.                 10

10      Explain the following:-

        (a)     Friend Function
        (b)     Exception handling

(c)      Stream class hierarchy.                                  4+3+3=10