

MCA/M08  
Object Oriented Systems and C++  
MCA -205

Time : 3 Hours

MM:50

Note:- Attempt Five questions in all, selecting One question from each unit. All questions carry equal marks.

UNIT-I

- 1 Explain the concept of Object Oriented. Explain its importance over the conventional approach. Why we call OO approach as close real world approach? Explain with the help of examples.
- 2 Explain the following:
  - (a) Ordering
  - (b) Qualification
  - (c) Aggregation
  - (d) Generalization

UNIT-II

- 3 Explain various object modeling techniques.
- 4 Explain the following with examples:
  - (a) Event
  - (b) State
  - (c) Activity
  - (d) Action

UNIT- III

- 5 Differentiate between the following:
  - (a) Dynamic Model V/s Functional Model
  - (b) Control Flow and Data Flow
- 6(a) Define data members, member function, private and public members with example.
- (b) What is friend function? Can a friend function access the private member of a class?

UNIT-IV

- 7 What is constructor? Give some properties of constructors. Also explain with examples:
  - (a) Copy Constructor
  - (b) Default Constructor
  - (c) Parameterized ConstructorWrite a program to calculate n! Use constructors. Also explain with examples:

- (a) Copy Constructor
  - (b) Default Constructor
  - (c) Parameterized Constructor
- 8(a) What do you understand by Inheritance? Write its advantages. Also explain the difference between nesting and inheritance with the help of an example.
- (b) Define a base class and a derived class. If a base class and derived class each include a member function with the same name and arguments, which member function will be called by the object of the derived class if the scope operator is used?

#### UNIT-V

- 9 Differentiate between the following:
- (a) functions read ( ) and write ( )
  - (b) fstream class the ifstream class
  - (c) ifstream class and ofstreamclass
  - (d) seekg ( ) and seekp ( ) functions.
- 10 Write short notes on the following:
- (a) Template functions and template classes
  - (b) Operator overloading and functions overloading