

# 22316

**21222R**

**3 Hours / 70 Marks**

Seat No. 

--	--	--	--	--	--	--	--

- Instructions* –
- (1) All Questions are *Compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Assume suitable data, if necessary.
  - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following: 10**
  - a) State any Four application of oop.
  - b) Explain user defined datatype with example.
  - c) Describe use of scop resolution operator with example.
  - d) Define constructors and it's type.
  - e) Explain concept of pointer with example.
  - f) Explain file modes used to perform file operations.
  - g) List all stream classes used in stream operation.
  
- 2. Attempt any THREE of the following: 12**
  - a) Develop a c++ program to print Fibonacci series.
  - b) Develop a c++ program for multilevel inheritance.
  - c) Develop a c++ program for accept data from user to calculate percentage for 5 subject and display grade according to percentage.
  - d) Develop c++ program to open and read content of file also write “object oriented” string in file and close it.

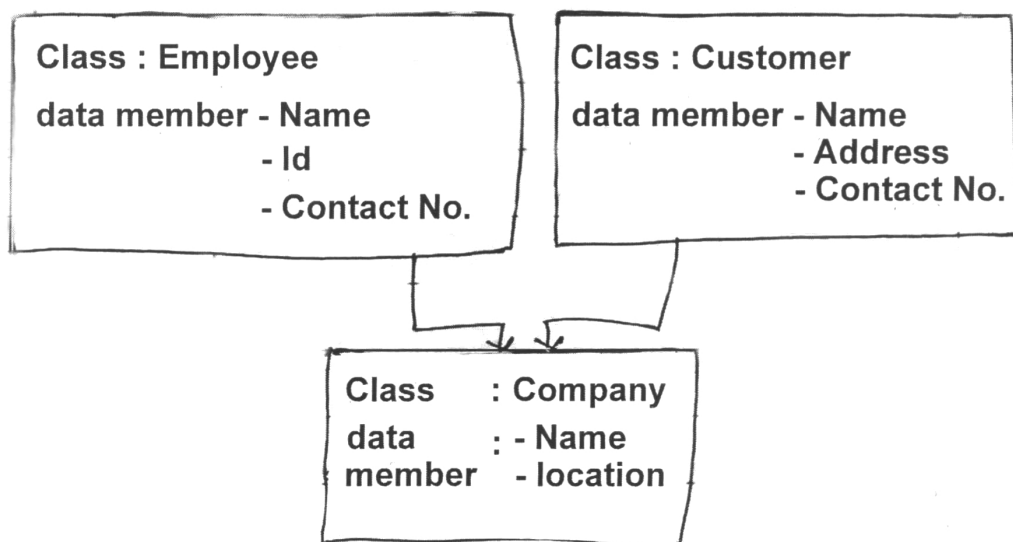
P.T.O.

**3. Attempt any THREE of the following: 12**

- a) Describe structure of c++ program.
- b) Explain with suitable example Friend Function.
- c) Describe all visibility modes and effects with example.
- d) Differentiate between compile time polymorphism and Runtime polymorphism.

**4. Attempt any THREE of the following: 12**

- a) Develop a c++ program to implement inheritance shown in following fig.



- b) Develop a c++ program to print sum of 10 no. using array.
- c) Develop a c++ program to perform arithmetic operation using pointer.
- d) Develop a c++ program to create structure student with data member Name, Roll No., percentage accept and display data for 5 student using structure.
- e) Develop c++ program to check Detection of end of file.

**5. Attempt any TWO of the following:****12**

- a) Define class book with following Data member and member function for 10 book.

Data Member	Member Function
1. B - name	→ getdata ( )
2. B - author	→ put data ( )
3. B - price	

- b) Develop a c++ program to implement virtual Base class.  
c) Explain rules of operator overloading and overload '+' operator to concatenate two string.

**6. Attempt any TWO of the following:****12**

- a) Develop a c++ program for constructor with default argument and use of destructor.  
b) Describe Function overloading with suitable program.  
c) Develop c++ program to implement inheritance shown in fig.

