BACHELOR OF COMPUTER APPLICATIONS (Pre-revised)

(BCA)

Term-End Practical Examination

December, 2016

00253

CS-72(P)/S4 : C++ AND OBJECT ORIENTED PROGRAMMING

Time : 2 Hours *Maximum Marks : 100*

(Weightage : 15%)

Note : *(i)* *There are two **compulsory** questions in this paper carrying 40 marks each. Rest 20 marks are for viva-voce.*

(ii) *You must write appropriate main( ) function and test your programs.*

(iii) *Write/print your programs, input and results on your answer-sheet.*

(iv) *Make and state suitable assumptions, if any.*

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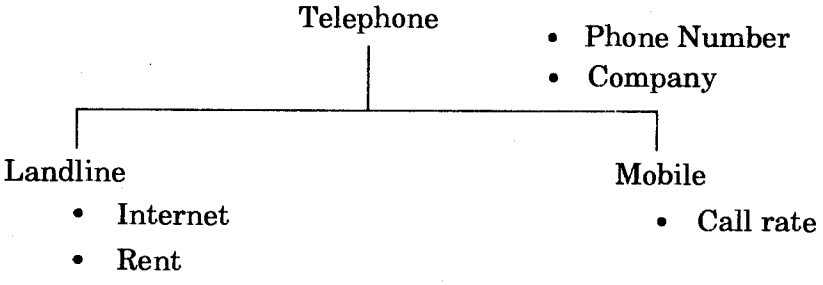
1. Design and implement a class named "Liquid" using C++. The class should have data members as chemical name, density, use and storage instructions. You may add more data members, if needed. The class should have two member functions — one to input information into data members of an object, the other for displaying all the information of an object.

Write appropriate main( ) function which creates an array of three "Liquid" objects. The main( ) function should demonstrate all the functionality of the class. You must enter meaningful data in the objects. *40*

2. Consider the following class hierarchy along with suggested data members :



Design and implement the classes in the hierarchy using C++. You may add more data members in the classes, if needed. You should include at least one constructor in each class. All the classes should have a member function show_tele_info( ) which displays all the data stored in the object of the class. You must demonstrate polymorphism using main( ) and show_tele_info( ) functions. *40*