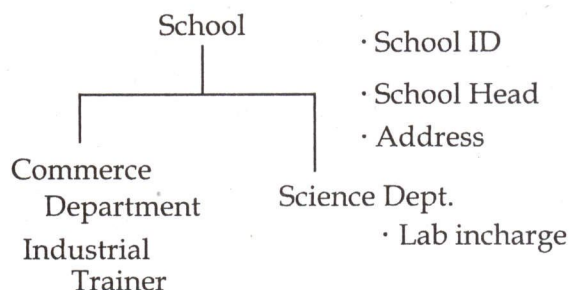


BACHELOR IN COMPUTER APPLICATIONS (BCA)**Term-End Practical Examination****00044****December, 2011****CS-72P : C++ AND OBJECT ORIENTED PROGRAMMING***Time allowed : 2 hours**Maximum Marks : 100**(Weightage : 15%)***General Instructions :**

- (i) There are two **compulsory** questions in this paper of **40** marks each. Rest **20** marks are for **viva-voce**.
- (ii) You must write the appropriate `main()` function and test your programs.
- (iii) Write/print the programs, input and results on your answer-script.
- (iv) Make and state suitable assumptions, if any.

1. The marks of a student in five different subjects along with the name and student ID are kept in a class `Student_Marks`. Design and implement the class with suitable functions for input and display of information. Use this `Student_Marks` class in `main ()` to create an array of student marks. (at least 5 students). Display the information of all the 5 students. 40
2. Consider the following class hierarchy along with the suggested data members for the classes : 40



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 `"print_info()"` which prints all the data of an object of that class. You should demonstrate polymorphism using `print_info()` and appropriate `main ()` function.