

**BACHELOR OF COMPUTER APPLICATIONS (Pre-revised)  
(BCA)**

**00472** Term-End Practical Examination  
December, 2017

**CS-72(P)/S2 : C++ AND OBJECT ORIENTED PROGRAMMING**

*Time : 2 Hours*

*Maximum Marks : 100*

*(Weightage : 15%)*

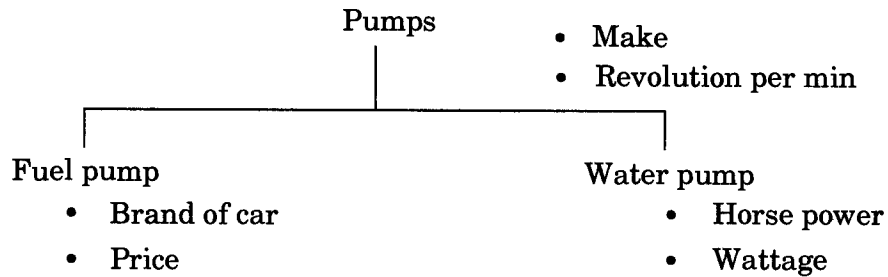
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- Note :**
- (i) *There are two **compulsory** questions in this paper carrying 40 marks each. Rest 20 marks are for viva-voce.*
  - (ii) *You must write appropriate main( ) function and test your programs.*
  - (iii) *Write/print your programs, input and results on your answer-sheet.*
  - (iv) *Make and state suitable assumptions, if any.*
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1. Design and implement a class "Wishitem" using C++. The class should have the following data members and functions :
- Data members of the class should include :
    - Itemcode
    - Itemname
    - Price
  - The member functions of the class should include :
    - (a) A function to input data into data members of an object.
    - (b) A function that displays data stored in data members of an object.
    - (c) A function that displays the price of the item if itemcode of the item matches the specified itemcode.

Write appropriate main( ) function that uses an array to create a list of three "Wishitem" objects. The main( ) function should demonstrate all the functions of the "Wishitem" class. You must store meaningful values in the objects.

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



Design and implement the classes in the given 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 one member function “print\_pump\_info( )” which should display all the information of that object. Demonstrate polymorphism using the print\_pump\_info( ) and main( ) functions. 40