

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

Term-End Practical Examination

June, 2018

CS-72(P)/S1 : 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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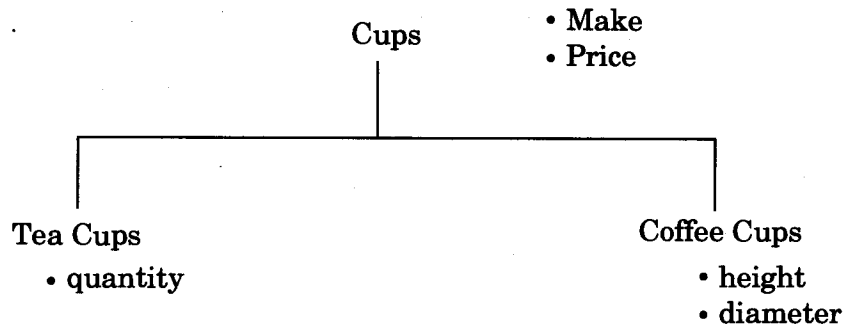
1. Design and implement a class "Doctor" using C++. The class should have the following data members and functions :

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- Data members of the class should include :
 - Doctor ID
 - Name
 - Specialisation
- The member functions should include :
 - A member function to input data in the data member of a doctor object.
 - A function that displays specialisation of doctor.

Write a main() function that creates a list of three doctor objects (using arrays) and lists all the doctors whose specialisation is "Physician". You must store meaningful values in the objects.

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 one member function `display_info()` which should display all the information of that object. Demonstrate polymorphism using the `display_info()` and `main()` functions.

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