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

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Term-End Practical Examination
June, 2016

CS-72(P)/S3 : 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 the programs, input and results on your answer-sheet.*
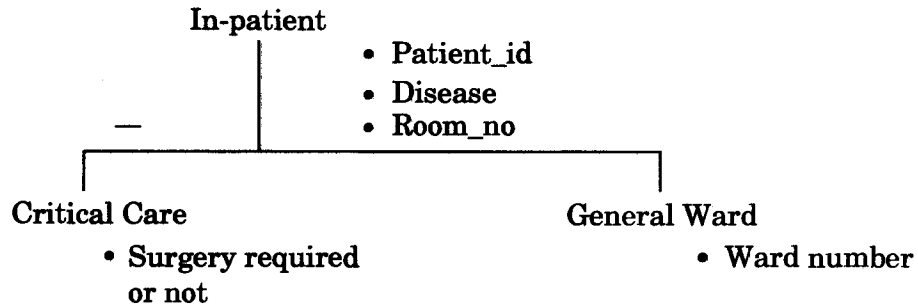
(iv) *Make and state suitable assumptions, if any.*

1. Design and implement a class named "Engineer" using C++. The class should store Engineer name, branch of engineering, year of passing, present salary and organisation working on. The class has the following two member functions :

- First function for input of values to all the data members of an object

- Second function takes a parameter branch of Engineering and returns true if parameter value and stored value in the object matches

Write appropriate main( ) function that creates an array of three "Engineer" objects. The main( ) should demonstrate all the functionalities of the class. The data input should be meaningful.   *40*

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

In-patient
- Patient_id
- Disease
- Room_no

Critical Care
- Surgery required or not

General Ward
- Ward number

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