SET - 1

BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

03574

December, 2011

CS-72P : C++ AND OBJECT ORIENTED PROGRAMMING

Time allowed : 2 hours

Maximum Marks: 100 (Weightage : 15%)

General Instructions :

- There are two compulsory questions in this paper of 40 marks each. Rest 20 marks (i)are for viva - voce.
- You must write appropriate main () function and test your program. (ii)
- Write/print the programs, input and results on your answer-script. (iii)
- Make and state suitable assumptions, if any. (iv)
- 40 1. Design and implement a class point 3D that represents a point in 3D as (x, y, z). The class has a constructor ; and a friend function which calculates the difference between two points.

Assume

distance between two points (x_1, y_1, z_1) and (x_2, y_2, z_2) is calculated as

- $\sqrt{(x_2 x_1)^2 + (y_2 y_1)^2 + (z_2 z_1)^2}$
- 2. Consider the following hierarchy along with suggested data members of classes :

Programme · Prog. code · Name Fee Part time Full time · Contact Phone

· Hostel Name

Design and implement the classes in the hierarchy using C++. You may add more data members in the classes, if needed. You may include at least one constructor in each class. Also implement a function print_info () that prints the details of the related object. You should demonstrate polymorphism using the print_info () and appropriate main ().

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