

# BACHELOR IN COMPUTER APPLICATIONS (BCA)

## Term-End Practical Examination

June, 2009

01330

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

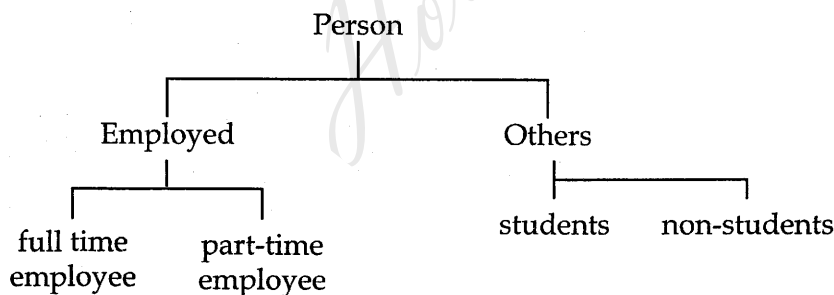
Time allowed : 2 hours

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. Design and implement a class `new_vector` using C++. The `new_vector` class stores a vector of 3 elements into a single dimensional array of 3 elements. The class has functions to input a vector of 3 elements, add two vectors and subtract two vectors. Also write a function to output a vector. Make suitable assumptions. 40
2. Design and implement the following class hierarchy using C++ : 40



Your implementation should include :

- Member variables for each class.
- Appropriate constructors for each class.
- A polymorphic function that displays the details of any object.

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