

**BACHELOR IN COMPUTER APPLICATIONS (BCA Revised)****Term-End Practical Examination**

00516

**June, 2011****CS-72P : C++ AND OBJECT ORIENTED PROGRAMMING**

Time allowed : 2 hours

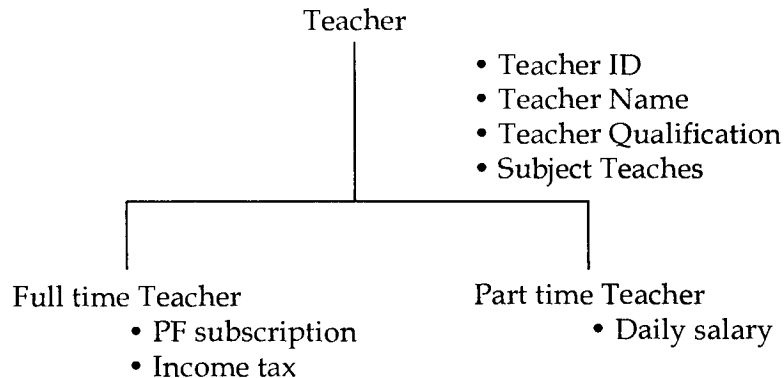
Maximum Marks : 100

(Weightage : 15%)

**General Instructions :**

- (i) There are two **compulsory** questions in this paper of **40** marks each. Rest **20** marks are for the **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 using C++ that represents distance between two places as kilometers and meters as two distinct integer data members, for example, the distance between Delhi and Gurgaon may be recorded as 30 kilometers 525 meters. The class has a overloaded plus(+) operator that calculates the total of distances. Make suitable assumptions, if any. **40**
2. Consider the following hierarchy along with suggested data members of the classes : **40**



A full time teacher has to necessarily subscribe to provident fund (PF). Income tax is also deducted from his/her salary. For the part time teacher only the daily salary information is stored in the class.

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 the classes, if required. Also implement a function `print-teacher-info( )` in the classes, wherever it is needed. You should demonstrate polymorphism using this `print-teacher-info( )` and appropriate `main( )` function.