SET - 3

BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

02653

June, 2010

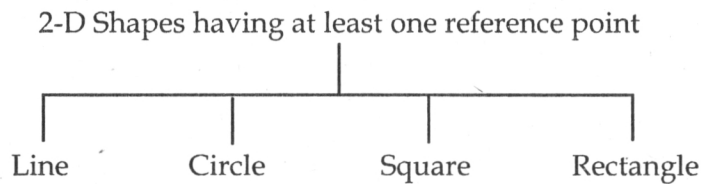### CS-72P : C++ AND OBJECT ORIENTED PROGRAMMING

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 using C++ that keeps the basic information about an account in a bank (the basic information must include account number and balance). The class should have a constructor that is used to create a new account object. The class should also have a function that transfers a requested amount from an account (identified by an account number) to another account.   **40**

2. Consider the following hierarchy :   **40**

2-D Shapes having at least one reference point

| Line | Circle | Square | Rectangle |

You may assume that a line object may be represented using two points ; Circle may be represented using the point (centre) and radius ; square by a left most point and side ; rectangle by a left most point, length and height.

Please note that the base class must have a data member – a reference point.

Design and implement the classes using C++ for the hierarchy as shown above. Each class should have at least one data member and a constructor.

In addition, you should implement a function that prints all the details of an object of a class, preferably using polymorphism. Implement the appropriate main ( ) function.