SET-1

BACHELOR IN COMPUTER APPLICATIONS (BCA)

Term-End Practical Examination

05350

June, 2009

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 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.*

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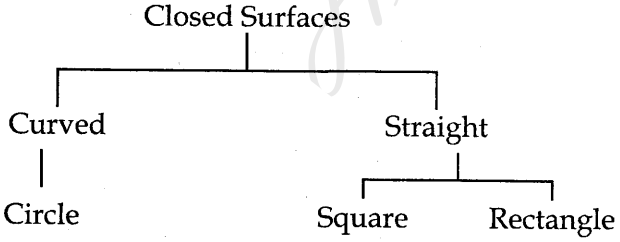
1. Design and implement a class my_prime using C++. The my_prime class stores the first seven prime numbers viz. 2, 3, 5, 7, 11, 13, 17 in an array. The class determines whether an input value (it should be between 1 and 400) is a prime value or not. The input value is stored in the class variable *n* by a function. The class also has a function that determines if *n* is prime or not. This information is output by an output function. You need to design the class and implement all the functions along with an appropriate main( ) function. **40**

2. Design and implement the following class hierarchy using C++ : **40**



Your implementation should include :

- The member variables for each class.
- Appropriate constructor for each class.
- A polymorphic function "CalArea" that calculates the area of the object.

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