BCA / D-12
INRODUCTION TO OBJECT ORIENTED
PROGRAMMING
Paper-BCA-351

Time allowed: 3 hours   Maximum marks: 90

Note: Attempt **five** questions in all, selecting **one** question from each section. **Question no. 1 is compulsory**.

 1. (a) Explain the role of preprocessor.   2
      (b) Distinguish between abstraction and encapsulation.   3
      (c) Explain merits and demerits of using a Friend Function.   3
      (d) Write short note on "passing parameters to function by reference and pointers".   4
      (e) Discuss the various forms of get() function supported by the input stream.
           How are they used?   3
      (f) Write down the rules for overloading operators.   3

Unit-I

2. (a) What is object-oriented programming? Explain the main characteristics/features of Procedure-oriented programming and object-oriented programming. Also list few areas of application of OOP technology.   10
     (b) What is a class? How does it accomplish data hiding?   8

3. (a) What do you mean by static data member and static member function of a class? Explain with example.   12
     (b) Write short note on Local class with example.   6

Unit-II

4. What is constructor? List some of the special properties of the constructor function. Also explain with the help of program default. Parameterized and copy constructor.   18

5. (a) What is a stream? Describe briefly the various stream classes.   8
     (b) Describe and explain the basic difference between manipulator and ios member Functions in implementation Give examples.   10

Unit-III

6. Explain the following concepts with the help of program:
     (a) Array of objects.
     (b) New and delete operator.
     (c) This pointer.   6,6,6

7. Explain with the help of program segments manipulating string objects using insert(), erase() and append() string functions.   18

Unit-IV

8. (a) What do you mean by operator overloading? Why is it necessary to overload an operator in C++?
     (b) Create a class called "time" that has separate into data members for hours, minute and seconds. Write a program to add two time objects. (use operator overloading for C++).   14

9. (a) When will you make a function inline? Explain the use of inline function with the help of program.   9
     (b) What do you mean by overloading of a function? When do we use this concept? Explain with the help of program.