

INTRODUCTION TO OBJECT ORIENTED PROGRAMMING

Time : Three Hours

Maximum Marks : 90

Note : Attempt **five** questions in all. Select **one** question from each section. Question No. 1 is compulsory. All questions carry equal marks.

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.
- (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 a short note on Local class with example. 6

UNIT-II

4. What is a constructor ? List some of the special properties of the constructor function. Also explain with the help of program default, parameterized and copy constructor. 8
5. (a) What is a stream ? Describe briefly the various stream classes. 8
- (b) Describe and explain the basic difference between manipulators 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.
7. Explain with the help of program segments manipulating string objects insert (), replace(), erase() and append() string functions. 18

UNIT-IV

8. (a) What do you understand by operator overloading ? Why is it necessary to overload an operator in C++. 4
- (b) Create a class called "time" that has separate int data members for hours, minutes and seconds. Write a program to add two time objects. (Use operator overloading for +). 14
9. (a) When will you make a function inline ? Explain the use of inline function with the help of program.
- (b) What do you mean by overloading of a function ? When do we use this concept ? Explain with the help of program. 9