

## Object Oriented Programming Using C++ (IT-252, June-07)

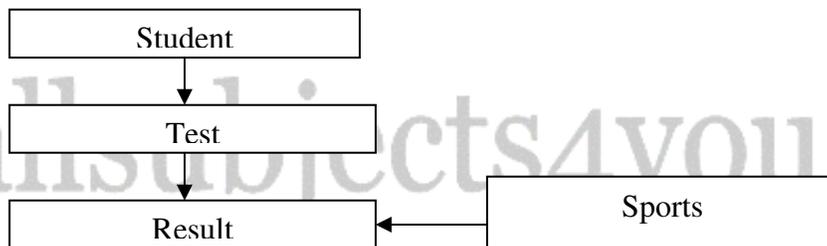
**Note:-** Attempt any five questions, selecting at least one question from each unit.

### UNIT-1

1. a) What are advantages of Object Oriented paradigm over procedural paradigm?  
b) What is the relationship between an object and class? Explain with suitable example.  
c) What is dynamic memory allocation and explain its advantages over static memory allocation?
2. a) When will you make a function on-line? Explain.  
b) Can we have more than one constructor in a class? If yes, explain with example.

### UNIT-2

3. a) Create a class rational which represent a numerical value by two double values numerator and denominator. Include the following member functions:-
  - i) Constructor with no arguments
  - ii) Constructor with two arguments
  - iii) Overload '+' operator to add two rational numbers.b) Write a program to implement the following relation:



4. a) What are pure virtual destructors? How they different from normal destructors?  
b) Explain the different types of inheritance with suitable examples.

### UNIT-3

5. a) What is the difference between opening a file with constructor function and opening a file with open ( ) function?  
b) What is a file mode? Describe the various file mode options available.
6. a) Write a program with the following:
  - i) A function to read two double type numbers from keyboard.
  - ii) A function to calculate the division of these two numbers.
  - iii) A try block to throw an exception when a wrong type of data is keyed in.b) What are the advantages of using exception handling mechanism in C++?

### UNIT-4

7. a) What are generic programming? How is it implemented in C++?  
b) What do you understand by overloading of template function?
8. Write short notes on any four:
  - a) Function Overriding
  - b) This Pointer
  - c) Names Space
  - d) Dynamic Binding]
  - e) Abstract Class