

**S.K.M's J. M. Patel College of Commerce, Goregaon (W), Mumbai – 90**  
**TEST SERIES 01**

**Time : 2.30 hrs**

**Marks: 75**

**Program : FYBScIT**

**Sem : II**

**Course : Object Oriented Programming**

- N. B.: (1) **All** questions are **compulsory**.  
(2) Answers to the **same question** must be **written together**.  
(3) Numbers to the **right** indicate **marks**.

**Q.1. Attempt any three of following:**

**15**

- a. What is object oriented programming paradigm? Discuss its characteristics.
- b. Explain : i. class      ii. Object      iii. polymorphism.
- c. Explain static and dynamic binding.
- d. Write a short note on data abstraction and data encapsulation.
- e. Discuss benefits and applications of oops.
- f. Write a program to find greatest number between three numbers.

**Q.2. Attempt any three of following:**

**15**

- a. How data members and member functions of a class can be accessed?
- b. What is a constructor? Explain the properties of it.
- c. Explain copy constructor with programming example.
- d. Declare a class rectangle with data members as length and breadth, and member functions as getdata() to read data and display() to find and display area and perimeter of a rectangle. Also write main method to implement the class.
- e. What is a friend function? How it can be declared?
- f. Write a short note on : Destructor.

**Q.3. Attempt any three of following:**

**15**

- a. Write down the rules for overloading operators.
- b. What is this pointer? Write a C++ program to demonstrate use of this pointer.
- c. What are virtual functions?
- d. Write a short note on : Static variable .
- e. Write a program to demonstrate function overloading.
- f. Write a program to overload + operator using member function.

**Q.4. Attempt any three of following:**

**15**

- a. What is inheritance? Discuss different forms of inheritance.
- b. Discuss public, private and protected data members of class.
- c. What is an exception? Explain exception handling mechanism in detail.
- d. Explain the concept of throw and catch.
- e. Write a C++ program to demonstrate use of hybrid inheritance.
- f. Write a C++ program to demonstrate use of multilevel inheritance.

**Q.5. Attempt any three of following:**

**15**

- a. Explain different file operations?
- b. Explain the classes used for file stream operations.
- c. Explain the use and purpose of following functions
  - (i) seekg() and seekp()
  - (ii) tellg() and tellp()
- d. What is a function template? Write a C++ program to demonstrate the use of function templates?
- e. What is a class template? Write a C++ program to demonstrate the use of class templates?
- f. Explain following:
  - i. close()
  - ii. getline()
  - iii. File opening modes