Fourth Semester B.Tech. Degree Examination, August 2018
(2013 Scheme)
13.403 : OBJECT ORIENTED TECHNIQUES (FR)

Time : 3 Hours
Max. Marks : 100

PART — A

All questions are compulsory. Each question carries 4 marks.

1. What is the use of “const” qualifier in C++?

2. Distinguish between private, protected and public access specifiers in a class.

3. How many arguments are needed for friend functions which overload unary and binary operators?

4. List any four parameters that cannot be overloaded and why?

5. What are streams? Specify its use. (5x4=20 Marks)

PART — B

Answer one question from each Module. Each question carries 20 marks.

Module – I

6. a) Elaborate various concepts of object oriented programming.

   b) Explain the use of inline functions with example program.

   (12 marks)

7. a) Write a C++ program to calculate the area of a circle, rectangle and triangle using function overloading.

   b) Write about the use of new and delete operators.

   (12 marks)

P.T.O.
Module – II

8. a) Define a class to represent a bank account. Include the following members:
Data members: Depositor name, Account number, Type of account, Balance amount in the account.
Member functions: To assign initial values (constructor), To deposit an amount, To withdraw an amount after checking the balance, To display name and balance. Write a main program to test the program.

b) Demonstrate the use of array of objects with an example program.

9. Explain the following with suitable program:
   a) Default and parameterized constructors
   b) Copy and Dynamic constructors.

Module – III

10. Illustrate various types of inheritances with an example program.

11. a) Demonstrate the use of virtual function with an example.
    b) Write a C++ program using operator overloading to perform the following complex number arithmetic. Arithmetic operations on two complex numbers (a, b) and (c, d) are as follows.

(a, b) + (c, d) = (a + c, b + d)

(a, b) − (c, d) = (a − c, b− d).

Module – IV

12. Write a C++ file program to store the details of 10 employees in a file called emp.dat. Read the contents file and generate a payroll for employees.

13. a) Write a generic function in C++ that will sort an array of integer, float values. Create a menu with appropriate options and accept the values from the user.
    b) Discuss in detail the formatted I/O operations.

(4×20=80 Marks)