Fourth Semester B.Tech. Degree Examination, June 2019
(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. Differentiate between procedure oriented and object oriented programming.

2. What is operator overloading? Which all operators cannot be overloaded in C++?

3. In control structure switch-case what is the purpose of default statement? What is the effect of absence of break in switch case in C++?

4. What is the significance of “this” pointer in C++?

5. How is an exception handled in C++?

PART – B

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

Module – I

6.  (a)  State the difference between class and struct and illustrate with an example. 8

(b)  Explain object oriented system design process. 12
7. What are in-line functions? Explain advantages of using in-line functions. Mention situations wherein-line functions cannot be used.

Module II

8. (a) What are friend functions? Illustrate with an example.

(b) Write a program to perform addition of time in hour-minute-second format. Use objects as function arguments.

9. Create a class vector to hold an array of integers and perform the following operations using constructor for dynamic allocation of array based on size given as argument.

(a) Create two vectors using constructor.

(b) Add the vectors and return the resultant vector.

(c) Multiply all elements in the vector by a given number X and display the resultant vector.

Module III

10. (a) With a sample C++ program explain overloading of unary operators.

(b) Write a C++ program to illustrate the concept of polymorphism by creating derived classes that define their own operation in virtual functions. A base class contains a pure virtual function but the actual function definitions are contained in the individual derived class function.

11. With sample C++ program, explain the various types of inheritance.

Module – IV

12. Define a function template giving its syntax. Write a C++ program to implement array representation of a stack for integers, characters and floating point numbers using class template.
13. (a) Describe the various classes available for file operations.

(b) Write a C++ file program to store the details of 10 employees in a file called emp.dat. Read the contents of the file and generate a pay roll for employees.