ANNA UNIVERSITY OF TECHNOLOGY, COIMBATORE

B.E. / B.TECH. DEGREE EXAMINATIONS : NOV / DEC 2010

REGULATIONS : 2008

THIRD SEMESTER

080230004 - OBJECT OREINTED PROGRAMMING

(COMMON TO CSE / IT)

TIME : 3 Hours   Max. Marks : 100

PART - A

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. Define data abstraction.
2. Define local classes.
3. How can one define a function from outside the class?
4. Define function prototype.
5. What is parameterized constructor?
6. Define destructor with example.
7. List down the operators which cannot be overloaded.
8. When is a friend function compulsory?
9. Define dynamic initialization of objects.
10. Define non-type template arguments.
11. What is meant by asynchronous and synchronous exceptions?
12. Write the syntax for multiple catch statements.
13. Define pure virtual function.
14. What is meant by abstract class?
15. Define function over hiding.
16. Write their syntax for virtual base class.
17. Define stream and list its types.
18. List the various file stream classes.
19. List various manipulations of file pointers.
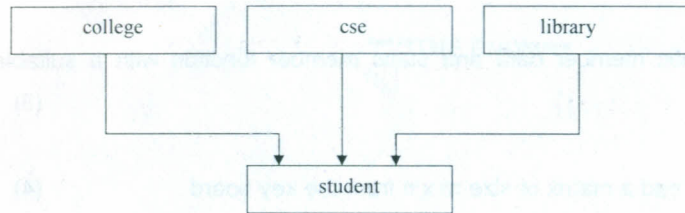20. What are the error handlings functions used in file systems?

PART – B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

21. a) Explain about static member data and static member function with a suitable program. (8)

    b) Write a function to read a matrix of size m x n from the key board (4)

22. a) Explain about the constructor with default arguments (4)

    b) How can overload the assignment operator? Explain with example. (8)

23. Explain about constructor with dynamic allocation with suitable program.

24. Explain the concept of overloading of template function with example.

25. Write a C++ program to add two vectors values by using class template.

1
2

26. Identify the inheritance from below figure and explain with their syntax and appropriate program.

(The class names should be **college, cse , library** and *student*)

```
┌──────────┐     ┌──────────┐     ┌──────────┐
│ college  │     │   cse    │     │ library  │
└────┬─────┘     └────┬─────┘     └────┬─────┘
     │                │                │
     │            ┌───▼────┐           │
     └───────────►│student │◄──────────┘
                  └────────┘
```

27. a) Write a C++ program which inserts a new item in to a random access file and
    displays its contents.   (8)

   b) How can you design an own manipulators?   (4)

28. Explain in briefly about formatted console I/O operations with example.

****THE END****