

D 275

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2003.

Fourth Semester

Computer Science Engineering

CS 237 — OBJECT ORIENTED PROGRAMMING

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the different phases of C++ program execution.
2. What is a variable in C++? How to form a variable?
3. What is a constructor? What is its role?
4. What is a class? What are parts of class specification?
5. What are the types of inheritances?
6. What is an abstract class? Mention its use.
7. What is the role of templates?
8. What are the types of exceptions?
9. What is a local variable in Java?
10. What are the ways of calling a method in Java?

PART B — (5 × 16 = 80 marks)

11. Describe the basic concepts of Object Oriented Programming and bring out the advantages of OOP.
12. (a) Explain the declaration of a class in C++. How will you define the member functions of a class? Explain.

Or

- (b) What is the need for parameterized constructors? Explain the function of constructors with their declaration and definition inside a class.

13. (a) What is operator overloading? How will you define it? Illustrate unary operator overloading with an example.

Or

- (b) Describe the syntax of multiple inheritance. When do we use such an inheritance? Explain with an example.

14. (a) What is generic programming? How is it implemented in C++? Develop a program in C++ to swap two integer numbers and real numbers.

Or

- (b) What is meant by exceptions? How an exception is handled in C++? Bring out the advantages of using various exception handling mechanisms.

15. (a) Develop a Java program to illustrate the concept of interfaces used to support multiple inheritance.

Or

- (b) An educational institution wishes to maintain its employees database which is divided into a number of classes with minimum information as shown in figure 15 (b). Specify all the classes and define methods to create the database and retrieve individual information as when required.

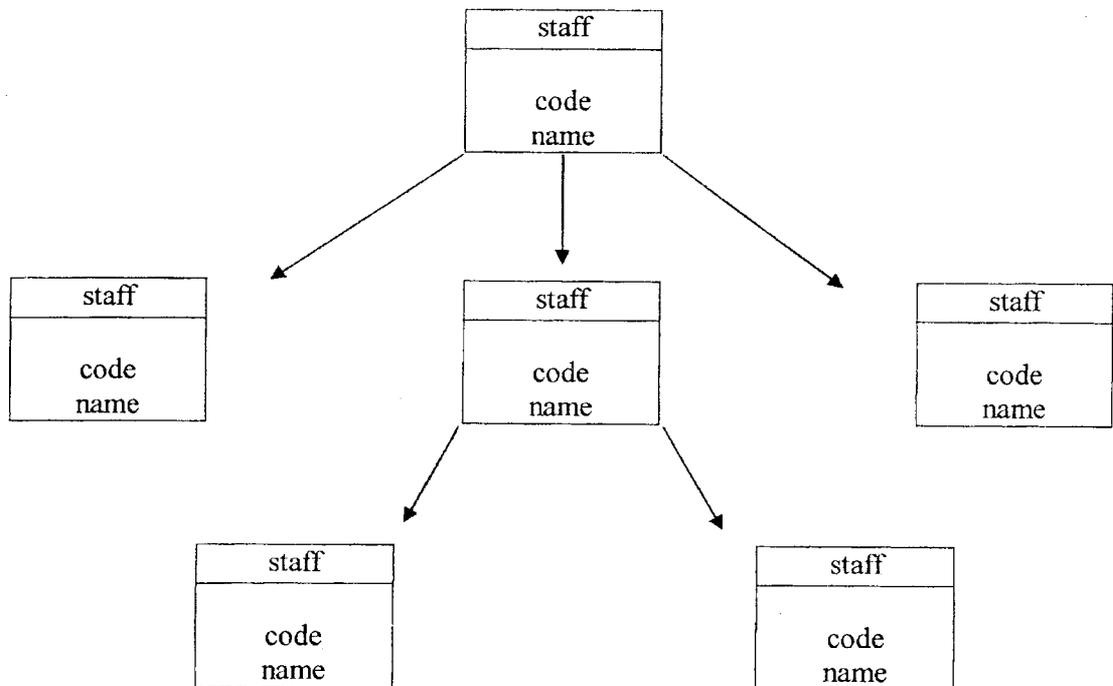


Figure 15 (b) : Class relationship