M 2035

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Third Semester

Computer Science and Engineering

CS 1204 — OBJECT ORIENTED PROGRAMMING

(Common to Information Technology)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is object oriented programming? How is it different from the Procedure Oriented Programming?

2. How does an Inline function differ from a preprocessor macro?

3. How do we declare a member of a class 'Static'?

4. Can friendship between classes be symmetric or transitive? Justify your answer with an example.

5. Explain the various file stream classes needed for file manipulation.

6. What are file pointers? Describe get–pointers and put–pointers.

7. Define Java Virtual Machine.

8. What is the major difference between interfaces and a class?

9. What is a package?

10. What are the two methods by which we may stop threads?

PART B — (5 × 16 = 80 marks)

11. (i) What is copy constructor? Explain it with suitable C++ coding? (8)

(ii) Write a program to overload the assignment operator using C++ language. (8)

12. (a) (i) Explain the elements of object oriented programming. (8)

(ii) What are the differences between reference variables and normal variables? Why cannot a constant value be initialized to variables of reference type? (8)

Or

(b) (i) What are the differences between pointers to constants and constant pointers? Give example. (8)

(ii) What are the advantages of using pointers in programming? Explain addressing mode required to access memory location using pointers. (8)

13. (a) (i) Write a program which copies the contents of one file to a new file by removing unnecessary spaces between words. (8)

(ii) Write a program to print the ASCII table using streams. (8)

Or

(b) (i) What is the difference between the statements? (6)

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C in >> Ch;
Ch = C in.get ( );
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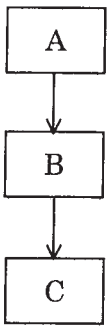
(ii) Write a program to overload the insertion and deletion operators in C++ . (10)

14. (a) Give an example that fits the following inheritance hierarchy.



Write a Java program to implement the example. (16)

Or

(b) Write statements that performs the following single–subscripted array operations : (16)

(i) Set the 10 elements of integer array counts to zeros.

(ii) Add 1 to each of the 15 elements of integer array bonus.

(iii) Print the five values of integer array best scores in column format.

15. (a) (i) Explain Multithreading with suitable Java Code. (8)

(ii) Write a program that accepts a name list of five students from the command line and store them in a vector. (8)

Or

(b) What is the purpose of using packages? How do you create user–defined package? Give an example. (16)