

C 141

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Third Semester

Computer Science and Engineering

CS 1204 — OBJECT ORIENTED PROGRAMMING

(Common to Information Technology and B.E. (Part-Time) II Semester Computer
Science and Engineering – R 2005)

(Regulations 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is Object Oriented Paradigm?
2. What is encapsulation?
3. What are the operators of C++ that cannot be overloaded?
4. How does constructor differ from normal functions?
5. What is the default access mode for class members?
6. What is an I/O stream?
7. What is the type of class for which objects cannot be created?
8. What type of inheritance is supported in Java?
9. What is Java virtual machine?
10. What is the default for members in C++ and methods in Java?

PART B — (5 × 16 = 80 marks)

11. (i) Explain object-oriented paradigm with all its essential elements. (12)
(ii) State the merits and demerits of object oriented methodology. (4)

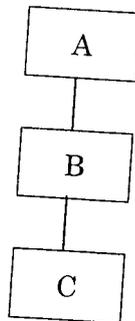
12. (a) (i) Write a C++ program to extract the elements placed in the odd position of the array. (8)
- (ii) State the rules to be followed while overloading an operator. Write a program to illustrate overloading. (8)

Or

- (b) (i) Discuss about polymorphism and its advantages. (8)
- (ii) Write a C++ program that will give the conditions of environment required, food habits and unique characteristics of pet animals fish and dog. Define a base class called pet that describe any common household pet; two derived classes called fish and dog with items specific to that type of animal. Write pure virtual functions in the base class for operations that are common to both types of animals. Write a program to test the usage of classes. (8)
13. (a) (i) Explain the 4 functions *Seekg*, *Seekp*, *tellg*, *tellp* used for setting pointers during file operation and show how they are derived from *fstream* class. (6)
- (ii) Write a program to append to the contents of a file. (10)

Or

- (b) (i) Write a program to write text in a file. Read the text from the file from end of file. Display the contents of file in reverse order. (8)
- (ii) What are the keywords used in C++ for exception handling? Describe their usage with suitable example. (8)
14. (a) Give an example that fits the following inheritance hierarchy.



Write a Java program to implement the example.

Or

- (b) Write a Java program to create a class rectangle and square. Compute their area and compare the areas. List the features of OOP used and describe them. (16)

15. (a) Write short notes on :

(i) Interfaces. (8)

(ii) Exception handling in Java. (8)

Or

(b) Write a Java program to illustrate communication between multiple threads. (16)
