LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

THIRD SEMESTER – NOVEMBER 2007

CS 3502 - OBJECT ORIENTED PROGRAMMING WITH C++

AK 17

Date : 27/10/2007

Dept. No.

Max. : 100 Marks

Time : 9:00 - 12:00

SECTION – A   (10 X 2 = 20 marks)

Answer ALL the questions:

1. List any four advantages of object-oriented programming.
2. What is meant by data abstraction?
3. What do you mean by data hiding?
4. What is a constructor?
5. Write down the operator symbols that can't be overloaded in C^{++}.
6. Define the term inheritance.
7. What is the use of virtual base classes?
8. What are command line arguments in C^{++}?
9. Write a note on 'this' pointer.
10. Mention the Syntax used for template class.

SECTION – B   (5 X 8 = 40 marks)

Answer ALL the questions:

11. a) What is Object Oriented Programming? How is it different from the Procedure Oriented Programming?

(OR)

b) Explain the class concept of C^{++}.

12. a) Explain the need for constructors.

b) Explain the difference between type casting and type conversion.

13. a) Write a Program to demonstrate call by reference and call by value.

b) What are default arguments? Explain its use with an example.

14. a) What is a friend function? What are the merits and demerits of using a friend function?

(OR)

b) What does Polymorphism mean in C^{++}?

15. a) Explain the need for Exception handling.

(OR)

b) Write a C^{++} Program to overload the 'Print' function to generate a variety of outputs.

SECTION – B   (2 X 20 = 40 marks)

Answer any TWO questions:

16. a) Discuss the basic concepts of object Oriented Programming.

b) Explain the Step by step program design in C^{++}.

17. a) With suitable example, explain various construction methods.

b) Design a Matrix class with necessary member function to create matrices of arbitrary size. Overload the '+' and '-' operators to perform addition and subtractions of matrix objects (Assume suitable matrix size element types).

18. a) Write a C^{++} program to accept the employee's detail, save it into "emp.dat" file and also write for reading data from the same file.

b) Write short notes on:
   i)   Overriding functions
   ii)   Templates

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