LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

THIRD SEMESTER – APRIL 2010

CS 3502 - OBJECT ORIENTED PROGRAMMING WITH C++

Date & Time: 23/04/2010 / 1:00 - 4:00   Dept. No.   Max. : 100 Marks

PART – A

Answer ALL the Questions **(10 x 2 = 20 marks)**

1. What is a Friend function?

2. Define inline functions.

3. What is the use of a Destructor?

4. Brief about the access specifiers of a class.

5. Differentiate Overloading and Overriding.

6. Distinguish between virtual and pure virtual functions.

7. Give the use of input and output streams.

8. What are the three streams that are used for file processing?

9. State the uses of terminate ( ).

10. Define templates.

PART – B

Answer ALL the Questions **(5 x 8 = 40 marks)**

11. (a) Implement a Class STRING. Write a friend function to compare 2 strings.

<div align="center">(OR)</div>

  (b) Explain how Default arguments can be used as an alternative to function overloading.

12. (a) Distinguish the following statements.

    Time t2(t1);

    Time t2 = t1;   Where t1 & t2 are objects of class Time.

<div align="center">(OR)</div>

 (b) Define a Class EMPLOYEE with the following details.

    Data Members: id, name, basic, gross and netpay.

    Member functions: to assign values, to calculate gross(da – 20%, hra – 40%, cca – 25%

    of the basic) and netpay after deduction(pf – 15% of basic), to display the gross and net

    pay of an employee. **(P.T.O.)**

13. (a) Define Inheritance. Explain its types with example.

(OR)

(b) Give the uses of this pointer with an example.

14. (a) Write short notes on unformatted I/O Operations.

(OR)

(b) Discuss about the various modes a file can be opened in C++.

15. (a) Write a C++ program using function template to find the maximum among two numbers in integer, float and double.

(OR)

(b) Explain how exceptions are handled in C++.

PART – C

Answer Any TWO Questions   **(2 x 20 = 40 marks)**

16. (a) Write a C++ Program to implement a sum function to find the sum of integer, floats and concatenate two characters using function overloading.
    (b) Explain how C++ is an Object Oriented Programming Language.

17. (a) Explain the types of constructor with examples.
    (b) Write a C++ Program to find the area of a circle, square & rectangle using virtual functions.

18. (a) Write a C++ program to open a file and read data from the file.
    (b) Explain Class templates with examples.

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