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06CS44

**Fourth Semester B.E. Degree Examination, Dec 08 / Jan 09**  
**Object Oriented Programming With C++**

Time: 3 hrs.

Max. Marks:100

**Note : Answer FIVE full questions, selecting atleast TWO questions from each Part A and Part B.**

**PART - A**

- 1 a. Discuss the issues of procedure oriented programming systems with respect to data security. If object oriented programming solves it, then how? (08 Marks)  
b. What are the features of reference variable? (04 Marks)  
c. Why C++ introduced reference variable? Explain with example. (08 Marks)
- 2 a. Compare "struct" and "class" keyword of C++. (02 Marks)  
b. Explain the need of friend function in C++. (06 Marks)  
c. Explain the term Namespace and Namespace pollution. (04 Marks)  
d. Explain with an example to illustrate the different features of keyword "Namespace" and "using". (08 Marks)
- 3 a. Explain the features of keyword "new" and "delete". (02 Marks)  
b. Write a C++ program using "set-new-handlers" function to generate out of memory condition and also make sure that out of memory condition is resolved. (10 Marks)  
c. What is the benefit of copy constructor? Explain with example to illustrate the necessity of defining our own copy constructor though default copy constructor exists. (08 Marks)
- 4 a. What is diamond shaped inheritance? Write a C++ program for the same. (06 Marks)  
b. Explain different order of invocation of constructors and destructors in inheritance with simple example. (14 Marks)

**PART - B**

- 5 a. What is need for virtual function? Write a C++ program to override member function of base class in the derived class. (08 Marks)  
b. Differentiate between virtual destructor and virtual constructor. (04 Marks)  
c. List different library classes that handle streams in C++. (04 Marks)  
d. Explain "Write ()" function of C++ to output the character type value to a disk file and to the display (Monitor) device. (04 Marks)
- 6 a. Explain error handling and manipulators in C++. (10 Marks)  
b. What are the circumstances in which operator overloading becomes mandatory? (06 Marks)  
c. Name any four rules for operator overloading. (04 Marks)
- 7 a. Write a C++ program to demonstrate the "new" and "delete" operator in overloading. (10 Marks)  
b. Demonstrate the over loading of assignment operator in C++ program. (10 Marks)
- 8 a. Write a template for the function swap () and using the same template exchange two int variables. (08 Marks)  
b. Explain any four functions of standard template library (STL). (04 Marks)  
c. Write a C++ program to demonstrate the try, throw and catch keywords for implementing exception handling. (08 Marks)

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