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Third Semester B.E. Degree Examination, June 2012
Object Oriented Programming with C++

Time: 3 hrs.   Max. Marks:100

Note: *Answer FIVE full questions, selecting*
atleast TWO questions from each part.

PART – A

1 a. Describe the following characteristics of object oriented programming :
i) Encapsulation   ii) Polymorphism   iii) Inheritance.   **(08 Marks)**
b. Write the general form of function. Explain the different types of argument passing techniques, with example.   **(08 Marks)**
c. What are pointers? Explain with example.   **(04 Marks)**

2 a. What is class? How it is created? Write a C++ programme to create a class called employee with data members : name, age and salary. Display at least '5' employee information.   **(10 Marks)**
b. What are constructors? How is a constructor different from member function? Illustrate with example.   **(06 Marks)**
c. What is data hiding? How it is achieved in C++? Explain with example.   **(04 Marks)**

3 a. What are friend functions? Why they are required? Illustrate with example.   **(10 Marks)**
b. What is the use of operator overloading? Write a programme to overload the following operators :
i) Pre – increment   ii) Post – decrement operators.   **(10 Marks)**

4 a. What is inheritance? How to inherit a base class as protected? Explain the inheriting multiple base classes.   **(06 Marks)**
b. With an example, explain the inheriting multiple base classes.   **(06 Marks)**
c. Explain with example base class access control.   **(08 Marks)**

PART – B

5 a. Explain the different order of invocation of constructors and destructors in inheritance, with simple example.   **(12 Marks)**
b. Explain with example, "granting access" with respect to inheritance.   **(08 Marks)**

6 a. What are virtual functions? What is the need of virtual function? How is early binding is different from late binding?   **(06 Marks)**
b. What is pure virtual function? Explain with an example.   **(08 Marks)**
c. How to inherit a virtual attributes? Explain with example.   **(06 Marks)**

7 a. What is exception handling? Write a C++ programme to demonstrate the "try", "throw" and "catch" keywords for implementing exception handling.   **(10 Marks)**
b. What is standard template library (STL)? List and explain any five member functions from "list" and "vector" classes.   **(10 Marks)**

8 Write a short note on :
a. C++ stream classes
b. File operation
c. Function overloading
d. Inline function.   **(20 Marks)**

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