

--	--	--	--	--	--	--	--	--	--

Third Semester B.E. Degree Examination, June/July 2014
Object Oriented Programming with C++

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Compare object oriented programming with procedure oriented programming. (06 Marks)
b. Define function overloading. Write a C++ program to define overloaded functions to find volume of cube, volume of cylinder and volume of cuboid. (08 Marks)
c. With an example, explain when the set of overloaded functions can be combined into a single function definition by using default arguments. (06 Marks)
- 2 a. Define the terms class and object. Write a C++ program to define a class called distance with feet and inches as data members and get(), put() and add() as members to read, display and add two distance objects. (10 Marks)
b. With an example, illustrate the characteristics of a constructor. (05 Marks)
c. Write a short note on destructors. (05 Marks)
- 3 a. With an example, explain the use of friend functions in C++. (06 Marks)
b. With an example, explain when to use member function and when to use friend function as an operator function for overloading binary operators. (08 Marks)
c. Write a C++ program to arrange set of integer and floating point values in ascending order by using a function template. (06 Marks)
- 4 a. With the help of syntax for creating the derived class, explain the visibility of the base class members, for the access specifiers private, protected and public. (08 Marks)
b. With an example, explain multiple inheritance. (06 Marks)
c. Explain the necessity of protected data members, with an example. (06 Marks)

PART – B

- 5 a. Explain the use of virtual base classes in diamond shaped inheritance. (08 Marks)
b. Explain the order of invocation of constructors and destructors in multilevel inheritance. (08 Marks)
c. Write a short note on use of scope resolution operator in inheritance. (04 Marks)
- 6 a. Define virtual function. Explain the need of a virtual function with an example. (06 Marks)
b. Write a C++ program to illustrate the virtual functions in hierarchical inheritance. (08 Marks)
c. Define abstract class. Write a C++ program to illustrate abstract class. (06 Marks)
- 7 a. Explain the following output manipulators:
i) setw() ii) setprecision() iii) setfill() (06 Marks)
b. Briefly explain the facilities available in fstream class for file operations. (06 Marks)
c. Write a C++ program to read a binary file, which contains the details of 5 students such as Name, rollno, age and grade obtained by the student. Display the above read details on the screen. (08 Marks)
- 8 a. What is exception handling? Write a C++ program to demonstrate the “try”, “throw”, and “catch” keywords for implementing exception handling. (10 Marks)
b. List and explain five member functions from vectors and lists classes in STL. (10 Marks)

* * * * *