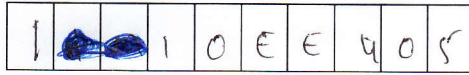# Sixth Semester B.E. Degree Examination, June 2012
Object Oriented Programming using C++

Time: 3 hrs.

Max. Marks:100

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

PART – A

1   a.   Distinguish between procedure oriented and object oriented programming.   **(06 Marks)**
    b.   Define a class and give a detailed syntax to declare a class.   **(08 Marks)**
    c.   Explain how C++ supports encapsulation and polymorphism.   **(06 Marks)**

2   a.   Explain different types of parameter passing mechanisms with an example.   **(06 Marks)**
    b.   With the help of examples explain:
         i) and # else   ii) new   iii) enumeration type.   **(07 Marks)**
    c.   Give the syntax of an inline function. When will you make a function inline and why?
         (07 Marks)

3   a.   Explain what is meant by an operator overloading.   **(04 Marks)**
    b.   Distinguish between local and global objects.   **(04 Marks)**
    c.   Write a C++ program to overload binary operator '+' to add two complex numbers and display the result. In the same program illustrate overloading of '–' to subtract two complex numbers using a friend function.   **(12 Marks)**

4   a.   What is function overloading? Illustrate with an example.   **(08 Marks)**
    b.   Explain the various looping constructs used in C++ with the help of flowchart and give the syntax of each construct.   **(08 Marks)**
    c.   Classify all the statements in C++.   **(04 Marks)**

PART – B

5   a.   What is a constructor? How to involve a construct? With an example distinguish between parameterized constructor and a copy constructor.   **(10 Marks)**
    b.   Explain compile time and runtime function polymorphism, with examples.   **(10 Marks)**

6   a.   What is inheritance? Explain different types of inheritance with the help of a block diagram.   **(12 Marks)**
    b.   There in a base class called numbers which consists of register number of students. There in another base class called marks which consists marks obtained in two subjects. There in a derived class called student which inherits from the two classes called members and marks. This derived class determines the total marks of two subjects and declare the result as pass if the marks exceeds 100 otherwise the result as fail. Write a C++ program to achieve this.
         (08 Marks)

7   a.   What is pure virtual function? Explain it's utility.   **(10 Marks)**
    b.   Explain the need for a virtual base class with an example.   **(10 Marks)**

8   a.   How is console I/O managed in C++?   **(08 Marks)**
    b.   What is a file mode? Describe various file modes available.   **(07 Marks)**
    c.   Explain static data member and member function.   **(05 Marks)**

* * * * *