3rd Semester Regular / Back Examination 2015-16
OBJECT ORIENTED PROGRAMMING
BRANCH(S): CSE,IT
Time: 3 Hours
Max Marks: 70
Q.CODE: T552
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1   Answer the following: (2 x 10)
  a) Describe the important parts of Standard C++?
  b) What is literals and how many types of literals are there in c++ and what are they?
  c) What is the diffrenece between C++ Reffrences and pointers?
  d) What are the benefits of DataAbstraction?
  e) What is Fstream?Write its use?
  f) **What is the output of following program?**
     #include<iostream.h>
     class test
     {
        public:
     struct Big
        {
     int   x;
         float y;
         void Function(void)
         {
            y = x = (x = 4*4);
            y = --y * y;
         }
         void Display()
         {
     cout<< y <<endl;
         }
       }B;
     }I;
     int main()
     {
     I.B.Display();
        return 0;
     }
  g) **What is the output of following program?**
     #include<iostream.h>
     class Test
     {
     int x, y;
        public:
     Test(int xx)

```cpp
        {
            x = ++xx;
        }
        void Display()
        {
cout<< --x << " ";
        }
};
int main()
{
TestobjBT(45);
objBT.Display();
int *p = (int*)&objBT;
    *p = 23;
objBT.Display();
    return 0;
}
```

h) What is the output of the following program with justification?

```cpp
#include<iostream.h>
class Test
{
    static int count;
    public:
    static void First(void)
    {
        count = 10;
    }
    static void Second(int x)
    {
        count = count + x;
    }
    static void Display(void)
    {
cout<< count <<endl;
    }
};
int Test::count = 0;
int main()
{
    Test :: First();
    Test :: Second(5);
    Test :: Display();
    return 0;
}
```

i) Define Inheritence and write the main purpose of using inheritance in Object oriented Programming?

j) Define exception and mention the names of three important keyword in which Exception handling built on?

Q2   What is operator overloading?Explain its syntax briefly?   **(10)**
Write a C++ Program to Add ,Substract,Multiply and Divide Complex Numbers Using Operator Overloading ?

Q3 Write a program to implement Binary search tree using class and traverse the tree using any traversal scheme. In addition to it the class must have capability to copy the contents from one tree to another and compare the contents of two binary trees? **(10)**

Q4 **a)** Write a C++ Program to Implement Modular Exponentiation Algorithm ? **(5)**
b) Write a program to check wheather a 2x2 matrix is invertible or not? **(5)**

Q5 **a)** Write a program implementing Queue stack & its operations using dynamic memory allocation? **(5)**
b) Write a Program for reading and writing data to and from the file using command line arguments? **(5)**

Q6 **a)** Write a Program using copy constructor to copy data of an object to another object? **(5)**
b) Write a Program to swap private data members of classes named as class_1, class_2 using friend function? **(5)**

Q7 **a)** Write a program to implement the exception handling with the functionality of testing the throw restrictions? **(5)**
b) Write a C++ program to swap datas entered by user using function templates? **(5)**

Q8 Short notes on any two **(5 x 2)**
a) Data Encapsulation
b) Namespaces
c) Inline Function
d) Datatype Modifiers