Third Semester Back Examination – 2014

C++ AND OBJECT ORIENTED PROGRAMMING

BRANCH(S) : BIOMED, BIOTECH, CHEM, CIVIL, EEE, ELECTRICAL, ENV, FASHION, FAT, MINERAL, MINING, MME, PLASTIC, TEXTILE

QUESTION CODE : L 320

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any **five** from the rest.*
The figures in the right-hand margin indicate marks.

1. Answer the following questions :   2 ×10

    (a) What is the difference between cout and Printf() ?

    (b) Can overloading of destructor is possible ? Justify.

    (c) What is containership ?

    (d) How can we create an anonymous object ?

    (e) What is dynamic binding ?

    (f) What is generic catch statement ?

    (g) What will be the output of the following program ?
```
#include<iostream.h>
long BFunction(int x, int y = 5, float z = 5)
{
    return(++x * ++y + (int)++z);
}
int main()
{
    cout<< BFunction(20, 10);
    return 0;
}
```

P.T.O.

(h) What will be the output of the following program ?

```
#include<iostream.h>
void MyFunction(int a, int b = 40)
{
    cout<< " a = "<< a << " b = " << b << endl;
}
int main()
{
    MyFunction(20, 30);
    return 0;
}
```

(i) Distinguish for loop and do while loop.

(j) When do we declare a member of o class static ? Justify the need of static members.

2. Describe different Features of OOPS.   10

3. What do you mean by manipulators describe different manipulators with example ?   10

4. (a) What is function overloading ? Write a C++ program to compute area of rectangle, square, circle and triangle using function overloading and class concept ?   5

(b) What is friend function ? Write a C++ program two swap two numbers using pointers and any non member function.   5

5. (a) What is multilevel inheritance ? Explain by writing a program to compute cost, weight and volume of a box by using three classes and box has length, breadth and height.   5

(b) What is Copy constructor ? Explain with suitable example.   5

6. (a) Why Exception Occurred ? Give a suitable example which describes *rethrowing* an exception.   5

(b) Write a C++ program to compute following expression using class : 5

$$Sum = 1 - X^2/2! + X^4/4! - X^6/6! + X^8/8! - \ldots$$

7. (a) Distinguish Class template and Template Class. How template function can be overloaded explain with suitable examples? 5

(b) What is ambiguity in multipath inheritance and how we can overcome it explain with example ? 5

8. Short notes on any **two** of the following : 5×2

(a) Abstract Class

(b) Function Overriding

(c) This Pointer

(d) Return By Reference.