Registrat	ion No. :												
Total number of printed pages – 7  BECS 2212													
Third Semester Regular Examination - 2014													
C++ AND OBJECT ORIENTED PROGRAMMING													
BRANCH(S): BIOMED, BIOTECH, CHEM, CIVIL, EEE, ELECTRICAL, ENV, FASHION, MINERAL, MINING, MM, MME, PLASTIC, TEXTILE													
QUESTION CODE: H 390													
Full Marks - 70													
Time - 3 Hours CHITRAL LIRES													
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 di	ffere	nce	betv	veen	obje	ct o	riente	ed ar	nd ol	oject	based
	programming language?												
(b)	What is put to operator? Why it is used? It belongs to which header file												er file?
(c)	What will be the output of the following program?												
	#include <iostream.h></iostream.h>												
	class test										13		
	{												
	stati	c int x;										26	
	publ	ic:											
	stati	c void s	SetDa	ata(i	nt xx)	1			K21				

x = xx;

```
void Display()
                cout<< x;
     };
     int test::x = 0;
     int main()
     {
          test::SetData(33);
          test::Display();
          return 0;
    What do you mean by embedded assignment? Give a suitable example.
(d)
     What will be the output of the following program?
(e)
     #include<iostream.h>
     class A
          public:
          struct B
               int x;
               float y;
              void Function(void)
                    y = x = (x = 4*4);
               void Display()
```

```
cout<< y << endl;
          }B;
     }1;
     int main()
     {
          I.B.Display();
          return 0;
     Distinguish between the following two statements:
(f)
          Time T2(T1);
          Time T2 = T1;
     Name the operators that cannot be overloaded in C
(g)
     We have two classes X and Y? If a is an object of X and K is an object of Y
(h)
     and we want to say a = b. What type of conversion contine should be used
     and where?
(i) What will be the output of the following program?
     #include<iostream.h>
     typedef void(*FunPtr)(int);
     int Look(int = 10, int = 20);
     void Note(int);
     int main()
     {
          FunPtr ptr = Note;
          (*ptr)(30);
          return 0;
     int Look(int x, int y)
```

```
return(x + y % 20);
     void Note(int x)
          cout << Look(x) << end LIBA
     What will be the output of the following program?
(j)
     #include<iostream.h>
     class PowerFinder
     {
         public:
          void Power(int x = 1, int y = 1)
               int P = 1, i = 1;
                while(++i \le y)
                     P *= x;
                cout<< P << endl;
      };
      int main()
      {
           PowerFinder FP;
           FP.Power(2, 6);
           return 0;
```

- (a) Write a C++ program to compute square root of any number without using any function.
  - (b) Write a C++ program to compute sin(x) without using any library function. 5
- (a) What is Exception and Exception Handling? Write a C++ program which satisfy following condition:
  - (i) A function to read two double types numbers from keyboard
  - (ii) A function to calculate the division of these two numbers
  - (iii) A try block to Throw an Exception When a wrong type of data is keyed in
  - (iv) A try block to detect and throw an exception if the condition "divide by zero" occurs
  - (v) Appropriate catch block to handle the exception thrown. 5
  - (b) Explain why switch case is proffered over if else ladder? Write a C++ program to compute factorial of a number using forloop, whileloop, and dowhileloop and inline function using class.
- (a) Write a C++ program to insert 10 elements into a stack using push operation and then pop 3 elements and display rest using class and constructor.
  - (b) What is function overriding? Write a C++ program to find the perimeter of rectangle and square using function overriding and abstract class.
    5

- (a) Define operator overloading. Write a C++ programs to overload + operator using friend function and class concept.
  - (b) What is the difference between constructor and function? Define constructor overloading. Write a C++ Programs to find out area of Rectangle, circle, Triangle of three sides using constructor overloading.
- (a) List the benefits of using pointer in character string. Write a C++ program
  to sort names of 5 countries using Pointer.
  - (b) Write a C++ program that reads a text file and creates another file that is identical except that every sequence of consecutive blank spaces is replaced by a single space.
- 7. (a) What is Template? Write a class Template to represent a generic vector.
  Include member functions to perform the following task:
  5

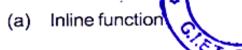
to create the vector

to modify the value of a given element

to multiply by a scalar vector"

to display the vector in the form (10,20,30,...)

(b) Write a C++ program to sort 10 integers using bubble sort and template function. 8. Write short notes on any two:



- (b) Hybrid Inheritance
- (c) polymorphism
- (d) Encapsulation.