Cat. No: Basc.2107                                      Marks: 80.00

Title: Computer programming (1+1)                      Time: 3 hours

**I  Answer all questions**                            (10 x 1=10)

1. Define class

2. Which allows you to create a derived class that inherits properties from more than one base class

3. What does C++ append to the end of a string literal constant

4. The keyword used to transfer control from a function back to the calling function is _____

5. Run Time polymorphism is achieved by _____

6. Name the header file to be include for the use of built in function  isalnum ()-

7. What is the output of given code fragment

   int f = 1, i=2

   while (++ i<5)

   f* = I ;

   cout<<f ;

8. A class defined within another class is :

9. Define Static data type

10. Which feature in OOP allows reusing code

**II Write short notes on any TEN questions**          (10 x 3=30)

1. Explain pointers in C++ with an example

2. What is abstraction or data hiding

3. Write a C++ program to calculate  the area of triangle

4. What is polymorphism

5. What is a COPY CONSTRUCTOR and when is it called

6. What are the differences between new and malloc

7. Define private, protected and public access control, with examples

8. What are the differences between overloaded functions and overridden functions

9. What is the difference between an object and a class

10. Differentiate between while and do-while statement with examples. what are friend functions

11. What are virtual functions

12. How template differ with macro

## III Write short essay on any SIX questions (6 x 5=30)

1. What is multilevel inheritance ?How is it different from multiple inheritance

2. Write a program in C++ which calculates the factorial of a given number

3. What are the basic concepts of object oriented programming

4. What are recursive functions .Write the advantages and disadvantages of recursive algorithms

5. What are tokens in C++

6. What will be the result of the following expressions when they are executed in sequence

   ...

   ```
   int a = 10 ;
   int b = 20;
   c = ++a + ++a + ++a ;
   b =b++ + b++ ;
   e = a++ + --a + b--;
   f = b -- & ++a + b++
   cout << c << d << e << f ;
   ```
   ...
   ...

7. Explain the meaning of polymorphism. Describe how polymorphism is accomplished in.

8. Discuss the different ways by which we can access public member function of an object

## IV Write essay on any ONE (1 x 10=10)

1. Write a program to open a file in C++ "Hello.dat" and write

   "This is only a test"

   "Nothing can go wrong"

   "All things are fine"

   Into the file .Read the file and display the contents

2. a) What are the different storage classes in C++

   b) Write a program to overload the operator '+' for complex numbers