Answer all the questions. Unneccesary explanation is strictly prohibited.

1. Mention the characteristics of OOP? Write down the freatures of C++. Explain the difference between OOP and POP. Have you ever realize the importance of C++ over C in your practice? if so how? If not why? Explain your opinion. [2+2++2+2]
2. What is class and object? Explain with suitable analogy. When static variables and this pointer is used? How template and exception hanlling is useful? Explain with an example [2+2+4]
3. Explain about the access specifiers in details. Write down about the constructor types and function overriding. Is the virtual keyword has the advantage?if so how? List all the overloaded operators. [2+2+2+2]
4. Write a program to divide two complex numbers. Your program must: [10]
   1. Have Class name: DivideComplex
   2. Use template for data types: check for c1(2,3) c2(4,5) and (2.8,3.8) c2(4.99,5.88).
   3. Use this pointer to assign given values to **real** and **img** data member through parameterized constructor and display value like: 2+3i in same constructor.
   4. Use friend function: Pass object as an argument and use formula for dividing complex number as (a+ib)/(c+id)= (ac-bd)+i(ad+bc)/(c^2-d^2). Use pow() for square as pow(x,2) and include it’s header file.
   5. Handle the exception as well. If c2(5,5) then (c^2-d^2) = 0 then it leads result to **inf.**
5. Write a program to add two matrices using the concept of operator overloading.[6]