2) What is OOP? List OOP concepts?

Ans- OOP treats data as critical element in program development and does not allow it freely around the system.

* It ties the data more closely to the function that operates on it.
* Object Oriented Programming allows decomposition of program into number of entities called objects and then builds data and function around these objects.

Some of the basic concepts of object oriented programming

are:

❖ Objects

* In other words object is an instance of a class.

❖ Classes

These contain data and functions bundled together under a unit. In other words class is a collection of similar objects. When we define a class it just creates template or Skelton. So no memory is created when class is created. Memory is occupied only by object.

❖ Data abstraction and encapsulation

* Abstraction means displaying only essential information and hiding the details. Data abstraction refers to providing only essential information about the data to the outside world, hiding the background details or implementation.
* Encapsulation is defined as wrapping up of data and information under a single unit. In Object-Oriented Programming, Encapsulation is defined as binding together the data and the functions that manipulate.

❖ Polymorphism

* The word polymorphism means having many forms. In simple words, we can define polymorphism as the ability of a message to be displayed in more than one form.
* C++ supports operator overloading and function overloading.

❖ Inheritance

* The capability of a class to derive properties and characteristics from another class is called Inheritance. Inheritance is one of the most important features of Object-Oriented Programing.
* Inheritance supports the concept of “reusability”, i.e. when we want to create a new class and there is already a class that includes some of the code that we want, we can derive our new class from the existing class. By doing this, we are reusing the fields and methods of the existing class.

❖ Dynamic Binding

3) What is the difference between OOP and POP?

Ans- In Procedure Oriented programming , the problem is viewed as sequence of things to be done such as reading, calculating and printing.

The number of functions are return to accomplish such task, i.e. the focus is on functions.

Characteristics of Procedure Oriented Programming.

* Emphasis is on doing things
* Large programs are broken into small known as functions
* Most of the function share global data.
* Data move openly around the system from function to function.
* Follows Top Down approach in program design

Object Oriented Programming allows decomposition of program into a number of entities called objects and then builds data and function around these objects.

Characteristics of Object Oriented Programming:

* Emphasis on data rather than procedure.
* Program are divided into objects.
* Data is hidden and cannot be accessed by external functions.
* Objects may communicate with each other through functions.
* Follows bottom up approach in program design.