**Q:2) What is OOP ? List OOP Concepts.**

OOP stands for Object Oriented Programming. It is about creating objects that contain both data and functions.

Below are OOP Concepts.

1. Object: It is a basic unit of OOPs. It is used to assign memory to class.

Object is a run time entity. It is created at a run time.

1. Class: It is a template or a blueprint which is a collection of data members and member functions.

We can also say that a class is a group of similar objects.

1. Encapsulation: It is basically keeping data in hide mode using private access specifier.
2. Constructor: It is used to assign memory to data members. It’s name is same as class name. It will be auto called at the time of creating an object.

There are three types of constructors:

1. Default Constructor
2. Parameterized constructor
3. Copy constructor
4. Inheritance: To inherit or derive class from one class to another class.

Types of Inheritance:

1. Single Inheritance
2. Multilevel Inheritance
3. Multiple Inheritance
4. Hierarchical Inheritance
5. Hybrid Inheritance
6. Polymorphism: One name having may forms.

There are two types of Polymorphism.

1. Overloading : It has static binding . It is compile time polymorphism.

It has two types:

1. Function Overloading
2. Operator Overloading
3. Overriding: It has dynamic binding. It is run time polymorphism.

**Q:3) What is the difference between OOP and POP ?**

* OOP is Object Oriented Programming where as POP is Procedure Oriented Programming.
* OOP binds data and functions together using class and Object where as in POP is a step-by-step approach to decompose a task using a set of variables and instructions.
* OOP supports inheritance and polymorphism where as POP doesn’t support inheritance and polymorphism.
* OOP is used to solve big problems. POP is not used suitable for big problems.
* OOP examples are C++,Java,Python. POP examples are C, FORTRAN