Q.2   What is OOP? List OOP concepts.

DEFINITION OF OOP

➢   OOP stands for object oriented programming.
➢   Object oriented programming is about creating objects that contain both data and function.
➢   Object means a real world entity such as pen, chair, table etc.

CONCEPT OF OBJECT ORIENTED PROGRAMMING

1. Object

2. Classes

3. Data abstraction and encapsulation

4. Polymorphism

5. Inheritance

6. Dynamic binding

1. Object: Object is an instance of a class.

➢   In other words classes acts as data types for objects.

2. Classes: A class is a blueprint for declaring and creating object.

Example: Fruits is class of apple.

3. Data abstraction: 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.

4. Encapsulation: Encapsulation is defined as wrapping up of data and information under a single unit.

➢   In oop encapsulation is defines as binding together the data and the function that manipulate them.
➢   Encapsulation is a collection of method and collection of variable combined process it's called encapsulation.

5. Polymorphism: 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.

6. Inheritance: The capability of a class to derive properties and characteristics from another class is called inheritance.

➢ Inheritance supports the concepts of "reusability".

7. Dynamic binding: Binding that takes place at runtime is known as dynamic binding.

Q.3 What is the difference between OOP and POP?

Ans:

<u>OOP</u>	<u>POP</u>
• Object oriented programming is about creating objects that contain both data and function	• Procedure oriented programming its deal with programs and function. program are divided into function and data is global
• Stands for object oriented programming	• Stand for procedural oriented programming
• Each object controls its own data	• Function share global variable
• It is possible to hide data	• There is no data hiding mechanism
• Divides the program in to multiple object	• Divides the program in to multiple function
• Modification is easier as objects are independent	• Modification are difficult as they can affect the entire program
• Supported by C++,Java, and Python	• Supported by C, Fortran, Cobol