ASSIGNMENT# 06

Question 1:

Define Object Oriented Programming Language?

Object-oriented programming is based on the imperative programming paradigm, which uses statements to change a program's state. It focuses on describing how a program should operate. OOP uses the concept of objects and classes. A class can be thought of as a 'blueprint' for objects. These can have their own attributes (characteristics they possess), and methods (actions they perform).

Question 2:

List down the Benefits of OOP?

1. Interchangeable for easier troubleshooting
2. Reuse of code through inheritance
3. Effective problem solving
4. Variability through polymorphism

Question 3:

Differentiate between function and method?

Programming languages we have two concepts functions and methods. Functions are defined in structural language and methods are defined in object oriented languages. The difference between both is given below:

Functions are self contained program they have return some values and the functions are defined in structured languages like Pascal, C.

Functions are called independently.

While methods are those do not have independent existence they are always defined with in class. Ex:- main() method in java Language that is defined with in a class.

Methods are called using instance or object.

Methods are used to manipulate instance variable of a class.

Question 4:

Define the following terms:

1. Class 2. Object 3. Attribute 4. Behavior

CLASS: A class describes the contents of the objects that belong to it: it describes an aggregate of data fields (called instance variables), and defines the operations (called methods).

OBJECT: An object is an element (or instance) of a class; objects have the behaviors of their class. The object is the actual component of programs, while the class specifies how instances are created and how they behave.

Attribute: An Attribute is a named property of a class. It has a type. It describes the range of values that that property may hold.

Behaviour: The behavior of an object is defined by its *methods*, which are the functions and subroutines defined within the object class. Without class methods, a class would simply be a structure.