Question 1:

Define Object Oriented Programming Language?

Answer:

Object-Oriented Programming (OOP) is the term used to describe a programming approach based on objects and classes. The object-oriented paradigm allows us to organize software as a collection of objects that consist of both data and behavior. This is in contrast to conventional functional programming practice that only loosely connects data and behavior.

Question 2:

List down the benefits of OOP?

Answer:

## 1. Modularity for easier troubleshooting

## 2. Reuse of code through inheritance

## 3. Flexibility through polymorphism

## 4. Effective problem solving

## **5. Dynamic Binding**

Question 3:

Differentiate between function and method?

Answer:

**Method**

1. Method is called by its name, but it is associated to an object (dependent).
2. A method is implicitly passed the object on which it is invoked.
3. It may or may not return any data.
4. A method can operate on the data (instance variables) that is contained by the corresponding class.

**Functions**

1. Function is block of code that is also called by its name. (independent)
2. The function can have different parameters or may not have any at all. If any data (parameters) are passed, they are passed explicitly.
3. It may or may not return any data**.**
4. Function does not deal with Class and its instance concept.

Question 4:

Define the following terms:

1. Class

2. Object

3. Attribute

4. Behavior

Answer:

1. **Class:**

The creation of objects is based on a programmer-defined blue-print also known as a Class. Classes are like ideas. Objects are concrete manifestations of those ideas.

1. **Object:**

An object is a component of a program that knows how to perform certain actions and how to interact with other elements of the program.

1. **Attributes:**

**Attributes**are data stored inside a class or instance and represent the state or quality of the class or instance. In short, attributes store information about the instance.

1. **Behavior:**

How an object acts & reacts in terms of states changes & message passing is known as behavior.