**Q1) Define Object Oriented Programming Language?**

A ) **Object**-**oriented programming** (**OOP**) refers to a type of computer **programming** (software design) in which programmers **define** not only the data type of a data structure, but also the types of operations (functions) that can be applied to the data structure.

It helps to reduce the complexity and also improves the maintainability of the system. When combined with the concepts of the Encapsulation and Polymorphism, Abstraction gives more power to the **Object oriented programming** languages.

**Q2) List down the Benefits of OOP?**

* A) Modularity for easier troubleshooting. Something has gone wrong, and you have no idea where to look.
* Reuse of code through inheritance.
* Flexibility through polymorphism.
* Effective problem solving.

**Q3) Differentiate between function and method?**

1. A **function is** a piece of code that **is** called by name. It can be passed data to operate on (i.e. the parameters) and can optionally return data (the return value). All data that **is** passed to a **function is** explicitly passed. A **method is** a piece of code that **is** called by a name that **is** associated with an object.

**Q4) DEFINITIONS:**

**A) a) CLASS:**

**Classes** (**OOP**) In **object-oriented** programming, a **class** is a blueprint for creating objects (a particular data structure), providing initial values for state (member variables or attributes), and implementations of behavior (member functions or methods). The user-**defined** objects are created using the **class** keyword.

**b) OBJECT:**

In **object**-oriented programming (OOP), **objects** are the things you think about first in designing a program and they are also the units of code that are eventually derived from the process. Each **object** is an instance of a particular class or subclass with the class's own methods or procedures and data variables.

**c) ATTRIBUTES:**

In Object-oriented programming(**OOP**), classes and objects have **attributes**. **Attributes** are data stored inside a class or instance and represent the state or quality of the class or instance. ... One can think of **attributes** as noun or adjective, while methods are the verb of the class.

d) BEHAVIOR:

A class's **behavior** determines how an instance of that class operates; for example, how it will "react" if asked to do something by another class or object or if its internal state changes. **Behavior** is the only way objects can do anything to themselves or have anything done to them.