**Question 1:**

**Define Object Oriented Programming Language?**

Object Oriented programming is a programming style which is associated with the concepts like class, object, Inheritance, Encapsulation, Abstraction, Polymorphism. Most popular programming languages like Python, Java, C++, C#, Ruby, etc. follow an object-oriented programming paradigm. As [**Python**](https://www.edureka.co/java-j2ee-training-course) being the most sought-after skill. An object-based application in Python is based on declaring classes, creating objects from them and interacting between these objects.

**Question 2:**

**List down the Benefits of OOP?**

1. Improved software-development productivity: Object-oriented programming is modular, as it provides separation of duties in object-based program development. It is also extensible, as objects can be extended to include new attributes and behaviors. Objects can also be reused within an across applications. Because of these three factors – modularity, extensibility, and reusability – object-oriented programming provides improved software-development productivity over traditional procedure-based programming techniques.

2. Improved software maintainability: For the reasons mentioned above, object oriented software is also easier to maintain. Since the design is modular, part of the system can be updated in case of issues without a need to make large-scale changes.

3. Faster development: Reuse enables faster development. Object-oriented programming languages come with rich libraries of objects, and code developed during projects is also reusable in future projects.

4. Lower cost of development: The reuse of software also lowers the cost of development. Typically, more effort is put into the object-oriented analysis and design, which lowers the overall cost of development.

5. Higher-quality software: Faster development of software and lower cost of development allows more time and resources to be used in the verification of the software. Although quality is dependent upon the experience of the teams, object oriented programming tends to result in higher-quality software.

**Question 3:**

**Differentiate between function and method?**

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. In most respects it is identical to a function except for two key differences:

1. A method is implicitly passed the object on which it was called.
2. A method is able to operate on data that is contained within the class (remembering that an object is an instance of a class - the class is the definition, the object is an instance of that data).

**Question 4:**

1. **Class:** A class is a blueprint that defines the variables and the methods common to all objects.
2. **Object:** An object, in object-oriented programming (OOP), is an abstract data type created by a developer.
3. **Attribute:** An attribute is a specification that defines a property of an object
4. **Behavior:** The behavior of an object is defined by its methods, which are the functions and subroutines defined within the object class.