Q1. What is the purpose of Python's OOP?

Solution – It allows us to develop applications using an Object-Oriented approach. In Python, we can easily create and use classes and objects. An object-oriented paradigm is to design the program using classes and objects. The object is related to real-word entities such as book, house, pencil, etc.

Q2. Where does an inheritance search look for an attribute?

Solution - An inheritance search looks for an attribute first in the instance object, then in the class the instance was created from, then in all higher superclasses, progressing from left to right (by default). The search stops at the first place the attribute is found.

Q3. How do you distinguish between a class object and an instance object?

Solution - A class is a type of blueprint that you can use to make objects. A concrete 'thing' that you constructed using a certain class is an object, which is an instance of a class. So, while the terms 'object' and 'instance' are interchangeable, the term 'instance' refers to an object's relationship to its class.

Q4. What makes the first argument in a class's method function special?

Solution - The calling process is automatic while the receiving process is not (its explicit). This is the reason the first parameter of a function in class must be the object itself. Writing this parameter as self is merely a convention. It is not a keyword and has no special meaning in Python.

Q5. What is the purpose of the __init__ method?

Solution - The __init__ method lets the class initialize the object's attributes and serves no other purpose. It is only used within classes.

Q6. What is the process for creating a class instance?

Solution - In object-oriented programming (OOP), an instance is a specific realization of any object. An object may be different in several ways, and each realized variation of that object is an instance. The creation of a realized instance is called instantiation. To create instances of a class, you call the class using class name and pass in whatever arguments its __init__ method accepts.

Q7. What is the process for creating a class?

Solution - In Python, a class can be created by using the keyword class, followed by the class name.

Q8. How would you define the superclasses of a class?

Solution - The class from which a class inherits is called the parent or superclass. A class which inherits from a superclass is called a subclass, also called heir class or child class. Superclasses are sometimes called ancestors as well. There exists a hierarchical relationship between classes.