Q1. What is the meaning of multiple inheritance?

A1. Multiple inheritance is a feature of object-oriented programming languages that allows a class to inherit from more than one parent class. This means that the subclass will have access to all the attributes and methods of all the parent classes, making it possible to create complex inheritance hierarchies.

Q2. What is the concept of delegation?

A2. Delegation is a programming technique that allows one object to use the functionality of another object. Instead of inheriting behavior, an object simply forwards requests to another object that has the necessary behavior. This is often used as an alternative to inheritance when the relationship between two classes is not a strict "is-a" relationship.

Q3. What is the concept of composition?

A3. Composition is a programming technique that involves creating complex objects by combining simpler objects. This is often used as an alternative to inheritance when the behavior of a class cannot be expressed as a strict "is-a" relationship with another class. Instead, the class is composed of other objects that implement the necessary behavior.

Q4. What are bound methods and how do we use them?

A4. Bound methods are methods that are attached to an instance of a class. When a method is called on an instance, the instance is automatically passed as the first argument to the method. This is done automatically by Python, so it is not necessary to explicitly pass the instance as an argument. Bound methods are used to perform actions that are specific to an instance, such as modifying instance attributes.

Q5. What is the purpose of pseudoprivate attributes?

A5. Pseudoprivate attributes, indicated by a double underscore prefix, are a way of making instance variables "private" in Python. This means that they cannot be accessed directly from outside the class. The purpose of pseudoprivate attributes is to prevent accidental modification of important instance variables by code outside the class. However, it is still possible to access and modify these attributes using their mangled name, so they are not truly private.