Q1. What is the meaning of multiple inheritance?

Ans: Multiple inheritance is a feature in object-oriented programming languages that allows a class to inherit properties and behavior from more than one parent class. In other words, a class can be derived from more than one base class. This means that the derived class will have access to the attributes and methods of all the base classes it inherits from.

Q2. What is the concept of delegation?

Ans: Delegation is a software design pattern that enables an object to pass on certain responsibilities to another object. In other words, instead of performing a particular task itself, an object delegates the task to another object, which is better suited to handle it. This pattern is used to achieve composition and code reuse in object-oriented programming.

Q3. What is the concept of composition?

Ans: Composition is a fundamental concept in object-oriented programming that involves constructing complex objects by combining simpler objects. In this pattern, a class is made up of one or more instances of other classes, rather than inheriting from them. These instances, which are part of the whole, are typically referred to as components.

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

Ans: In the context of programming, a bound method refers to a method (a function associated with a class) that is tied or "bound" to an instance of that class. It means the method is associated with a specific object, and when you call the method on that object, it has access to the object's attributes and can operate on its data. In contrast, an unbound method, often just called a "method," is a function associated with a class but not tied to any specific instance, and it typically takes the instance as its first argument (usually named self).

Q5. What is the purpose of pseudoprivate attributes?

Ans: Pseudoprivate attributes, sometimes referred to as name mangling, are a feature in some programming languages, including Python, that provide a way to create variables within a class that are hidden from external access. These attributes are not truly private in the sense that they cannot be accessed at all, but they are obfuscated in a way that discourages direct access from outside the class.