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

Ans. Python is an object-oriented language which allows developers to create applications using a logical approach. Classes and objects can be easily created and the object is related to real-world entities - making it easy to reuse code. The OOps concept focuses on writing reusable solutions; it's a widespread technique that helps solve problems by creating objects.

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

Ans. inheritance happens when an object is qualified, and involves searching an attribute definition tree (one or more namespaces). Every time you use an expression of the form object.attr where object is an instance or class object, Python searches the namespace tree at and above object, for the first attr it can find. Because lower definitions in the tree override higher ones, inheritance forms the basis of specialization.

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

Ans.

|  |  |
| --- | --- |
| Class Object | Instance Object |
| In order for the class to be declared, it must first be announced. This can only happen once. | Many times, an object is created according to the needs of a specific person or group. |
| When a new class is created, no memory space is allocated. | Objects are allocated memory space whenever they are created |
| A class cannot be manipulated as it does not exist in memory. | Objects can be manipulated |
| An object is an instance of a class. | An object is an instance of a class |

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

Ans. This is why the first parameter of a function must be an object, as opposed to just any value. This ensures that the function will work properly with specific objects and won't have unintended consequences.

Q5. What is the purpose of the \_\_init\_\_ method?

Ans. \_\_init\_\_ is a reserved method in Python, which serves as the constructor for an object. This function can be called when an object is created from a class, and access to its attributes must be granted.

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

Ans. Rephrase To create a new instance of the class, you call it using its name and pass in any arguments it accepts on its \_\_init\_\_ method.

Rephrase To access the attributes of an object, you use the dot operator and reference its class name.

Q7. What is the process for creating a class?

Ans. The class method is a special type of procedure that can be invoked on an object by using the & class keyword. This parameter refers to the current instance of the class being operated upon.

Class methods are Methods that can be called on the class itself, not a specific object instance. As a result, it belongs to the class level and all classes share the same Class Method.

A class method is associated with the class itself, not any individual object it may be called on. This means that it can access only variables belonging to the class as a whole.

The classifier can change the state of a whole group of objects by altering the value of a specific variable that applies to all members of the group.

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

Ans. A superclass is the base class from which other classes can be created. Subclasses inherit many of the characteristics of the superclass, making it a good reference point for learning about different concepts or ideas.