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

**ANS**

* In Python, object-oriented Programming (OOPs) is a programming paradigm that uses objects and classes in programming.
* It aims to implement real-world entities like inheritance, polymorphisms, encapsulation, etc. in the programming.
* The main concept of OOPs is to bind the data and the functions that work on that together as a single unit so that no other part of the code can access this data.

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

**ANS**

 the inheritance search is simply a search of the tree from bottom to top looking for the lowest occurrence of an attribute name

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

**ANS**

|  |  |
| --- | --- |
| Class | Object |
| A class is a template for creating objects in program. | The object is an instance of a class. |
| A class is a logical entity | Object is a physical entity |
| A class does not allocate memory space when it is created. | Object allocates memory space whenever they are created. |
| You can declare class only once. | You can create more than one object using a class. |
| Example: Car. | Example: Jaguar, BMW, Tesla, etc. |
| Class generates objects | Objects provide life to the class. |
| Classes can’t be manipulated as they are not available in memory. | They can be manipulated. |
| It doesn’t have any values which are associated with the fields. | Each and every object has its own values, which are associated with the fields. |

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

**ANS**

The first argument of every class method, including init, is always a reference to the current instance of the class. By convention, this argument is always named self. In the init method, self refers to the newly created object; in other class methods, it refers to the instance whose method was called.

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

**ANS**

The \_\_init\_\_ method is similar to constructors in C++ and Java. Constructors are used to initialize the object’s state.

 It is run as soon as an object of a class is instantiated. The method is useful to do any initialization you want to do with your object.

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

**ANS**

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?

**ANS**

* Classes are created by keyword class.
* Attributes are the variables that belong to a class.
* Attributes are always public and can be accessed using the dot (.) operator. Eg.: Myclass.Myattribute

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

**ANS**

The class from which a class inherits is called the parent or superclass.