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

***Ans:***

The purpose of the oops is to provide a way to programmer to organize and structure the code that makes it more looks good, reusable, and easier to maintain. Oops allows programmer to develop real world projects and classes which contains attributes and methods. Oops helps to instantiate objects that can interact with each other, or communicate with other part of the code, and solve complex problems. it’s also gives greater flexibility and extensibility of code, as new functionality can be add in the existing code by modifying classes or adding new one

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

***Ans:***

first it will look in the object instance, then if its not found in the instance then it will go for class of the instance. Even if the attribute is not found in the class, it then looks in the parent class of the first class in the inheritance chain and continues searching through the inheritance hierarchy until the attribute is found.

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

***Ans:***

In simple word, class object is a blueprint for creating the instance object. Class objects describe the behaviour and attributes of the objects that is created based on class. Instance object is specific object which created from class. A class object is defined using the "class" keyword and is used to define the attributes and methods that will be shared by all instance objects of that class. An instance object is created using the class name followed by parentheses.

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

***Ans:*** self is used in method definitions and in variable initialization. The self is used to represent the instance of the class. With this keyword you can access the attributes and methods of the class in python. It binds attributes with given argument.

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

***Ans:*** All classes have a function called \_\_init\_\_(), which is always executed when the class is being initiated. use the \_\_init\_\_() function to assign values to object properties, or other operations that are necessary to do when the object is being created.

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

***Ans:*** first define the class that sets the initial values of the objects attributes. Then create an instance of the class by calling the class constructor method.

Q7. What is the process for creating a class?

***Ans:***

1. Determine the purpose of the class.

2. choose the name of the class.

3. define the class.

4. define the attributes.

5. define the methods.

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

Ans: its provides blueprint for the subclass by defining its attributes and behaviors. then subclass inherits these attributes and behaviours and can also add its own attributes and behaviour.