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

Ans – the purpose of Python's OOP is to improve code organization, reusability, modularity, and maintainability. It allows you to create scalable and flexible applications by representing real-world entities as objects and leveraging principles such as encapsulation, inheritance, and polymorphism.

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

Ans - When you access an attribute (a variable or a method) on an object in Python, the inheritance search, also known as attribute resolution, follows a specific order to determine where to find that attribute. This order is known as the method resolution order (MRO).

The MRO is based on the class hierarchy and follows a depth-first, left-to-right traversal. It uses the C3 linearization algorithm to ensure a consistent and predictable order. The MRO can be accessed using the \_\_mro\_\_ attribute or the mro() method on a class.

1.The instance self

2. The instance's classs

3.the superclass

4. repated for each super class

5.attributeError

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

Ans -a class object represents the class itself and defines the structure and behavior of instances, while an instance object is a specific occurrence of the class with its own set of attributes and methods.

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

Ans - By using the self parameter as the first argument in a class's method function, you establish a link between the method and the instance object, enabling the method to operate on the instance's state and behavior.

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

Ans - The \_\_init\_\_ method in Python is a special method (also known as a constructor) that is automatically called when an instance of a class is created. It has a specific purpose: to initialize the attributes of the newly created object

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

Ans 1.Class Definition:.

2.Instantiation:

3. Optional Initialization:

4.Instance Usage:

Q7. What is the process for creating a class?

Ans a class is collection of of data member and method when we define a class ,memory space is not

Created for datamemebr and method and it can be treated as specification for real time application

@classmethod

Def classlevelmethod(cls,listofformal params if any):

Specifyclass level data members

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

Ans a class that derived form another class is called a superclass. the class from which the subclass is derived is

Called a superclass