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

Ans 1: Object-Oriented Programming is a programming that provides a means of structuring programs so that properties and behaviours are bundled into individual objects.

1.In python, Object-oriented programming uses objects and classes.

2.It aims to implement real world entities like inheritance, polymorphism, encapsulation etc, in the programming

3.the main concept of OOPs is to bind the data and the function 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?

Ans2:

Python searches for an attribute in an upward tree of attribute. The first search for an attribute in its instance and then looks in the class it is generated from , to all super classes listed in its class header.

**Parent class** is the class being inherited from, also called base class.

**Child class** is the class that inherits from another class, also called derived class.

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

Ans3*.* The difference between a class object and an instance object are:

1. Class is a template for creating objects where objects is an instance class.

2. Separate memory is allocated for each object whenever it is created but for a class

this does not happen.

3. A class is created at once whereas many objects are created using a class.

4. As classes have no allocated memory so they can't be manipulated but objects can be manipulated.

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

Ans3*.* Python classes usually have three types of methods which are:

1. Instance Methods (object level methods)

2. Class Methods (class level methods)

3. Static Methods (general utility method)

4. self is the first argument for the instance methods, which refers to the object itself, in simple way that which act like pointer.

5. class is the first argument for the class method which refers to the class itself.

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

Ans5.It serves the role of constructor in object oriented terminology. This method is called when an object is created from a class and it allows the class to initialize the attribute of the class.

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

Ans6. To create a class instance, we need to call the class by its name and pass the argument to the class, which its init method accepts.

Example: my\_name = my\_class("Aluvala","Anand") here my\_name is instance of class my\_class with attributes ‘Aluvala’ and 'Anand'

Q7. What is the process for creating a class?

Ans 7.

Class keyword is used to create a class in python.

Example:

class shape (this creates a class called shape).

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

Ans8.class DataScience(Ineuron) : Here the child class DataScience inherits the attributes and method/function from superclass/parent Ineuron