Name:

Grade:

Question 1. Is the following class valid?

```
class Employee:
    empid=0
    name=""
    def __init__(id,name):
        empid=id
        name=name
```

YES

NO

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Question 2. A class may contain

- methods
- attributes
- properties
- constructor
- instance attributes
- module
- package

Question 3. What is 'self' in Python?

- It is a keyword
- It is a class attribute
- It is a reference to an object which calls an instance method
- It is a built-in function in Python

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Question 4. All members of the class are _____ by default.

- public
- private
- protected
- internal

Question 5. Which of the following statement correct?

- Class attributes are the variables defined directly in the class that is shared by all objects of the class
- Class attributes are the variables defined inside the class method
- Class attributes are objects of the class
- None of the above

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Question 6. Create a Class Food with two instances of this class Bread and milk and print it.[4]

Question 7. The mechanism of designing a new class based on one or more existing classes is called:

- overriding
- inheritance
- polymorphism
- none of the above

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Question 8. What is overriding?

- Overriding can occur in the case of inheritance of classes
- It is a process of redefining inherited method in child class
- It is a magic method in Python
- None of these

Question 9. What is the biggest reason for the use of polymorphism?

- It allows the programmer to think at a more abstract level
- There is less program code to write
- The program will have a more elegant design and will be easier to maintain and update
- Program code takes up less space

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Question 10. Create a **Plane** class that inherits from the **Vehicle** class. Give the capacity argument of Plane.seat_number() a **default** value of 150.

Use the following code for your parent Vehicle class.

```
class Vehicle:
    def __init__(self, name, max_speed, mileage):
        self.name = name
        self.max_speed = max_speed
        self.mileage = mileage

    def seat_number(self, number):
        return f"The seat number of a {self.name} is {number} passengers"
```

Expected output: The seat number of a plane is 150 passengers

[4]

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Question 11. Decompose and define classes, methods and attributes in the following Python code:

```
class QuadriLateral:
    def __init__(self, a, b, c, d):
        self.side1=a
        self.side2=b
        self.side3=c
        self.side4=d

    def perimeter(self):
        p=self.side1 + self.side2 + self.side3 + self.side4
        print("perimeter =",p)

class rectangle(QuadriLateral):
    def __init__(self, a,b):
        super().__init__(a, b, a, b)

    def area(self):
        a = self.side1 * self.side2
        print("area of rectangle =", a)


class Square(rectangle):
    def __init__(self, a):
        super().__init__(a, a)

    def area(self):
        a=pow(self.side1, 2)
        print('Area of Square: ', a)


r1=rectangle(10, 20)
r1.perimeter()
r1.area()
s=Square(10)
s.area()
s.perimeter()
```

Class: _____

Method: _____

Attributes: _____

Output: _____

[4]

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Question 12. Write a Python program class named Square constructed by a length and width and a method which will compute the area of a square.

[4]

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