# Python OOP Practice Questions

Instance Method, Class Method, Static Method

## Instance Method Questions

1. 1. What is an instance method in Python? (Explain with a simple example.)
2. 2. Write a class `Car` with an instance method `start\_engine` that prints "Engine started."
3. 3. How do you call an instance method — with the class name or with the object? (Give example.)
4. 4. Create a class `Circle` that takes radius in `\_\_init\_\_` and has an instance method `area()` to calculate the area of the circle.
5. 5. What will happen if you try to call an instance method without creating an object?

## Class Method Questions

1. 6. What is a class method? How is it different from an instance method? (Answer with example.)
2. 7. Write a class `Employee` with a class variable `company = "TechCorp"` and a class method `get\_company\_name()`.
3. 8. How do you define a class method? (Which decorator is used?)
4. 9. Create a class `Counter` with a class variable `count` and a class method `increment()` that increases the count by 1.

## Static Method Questions

1. 10. What is a static method in Python? (Explain with example.)
2. 11. Write a static method `is\_even(num)` inside a class `MathUtils` that returns `True` if the number is even, else `False`.
3. 12. Which method type should you use when:  
   - You want to access/modify class variables — (Instance/Class/Static)?  
   - You don’t need class or instance data — (Instance/Class/Static)?