Here's a well-organized list of **interview/practice questions**, separated into **SQL** and **Python** categories, including Power BI and OOP concepts as requested:

## **✅ SQL QUESTIONS**

### **🔹 Basic Queries**

1. Create a table with the following fields: Id, Name, Age, Designation.
2. Write a query to show all tables in the current database.
3. Write a SQL query to update the value of a column in a table.
4. How to **add a primary key** to an existing table?
5. How to **connect two tables** using a foreign key?
6. Write a query to:  
   * Round the value of pi (3.14159) to 2 decimal places.
   * Get the remainder of 125 ÷ 8.
   * Count the number of characters in the word 'NewDelhi'.
   * Display the first 5 characters of 'Informatics Practices'.

### **🔹 String Functions**

1. Concatenate "MySQL", "is", and "Fun" using a SQL query.
2. Replace "Coding" with "MySQL" in "I Love Coding".
3. Display number of characters in "I Love India".

### **🔹 Advanced String Use Case**

1. For the string "Database Management System":  
   * Extract and display "Manage".
   * Display the position of "base".

### **🔹 Keys and Constraints**

1. 3 Differences between **Primary Key** and **Foreign Key**.
2. Difference between **Primary Key** and **Unique Key**.

### **🔹 Subqueries**

1. What are types of subqueries in SQL? Explain with examples.

## **✅ PYTHON QUESTIONS**

### **🔹 Set Operations**

1. How to take input from a user into a set?
2. Demonstrate use of add() and update() methods in set.
3. Difference between set() function and set class in Python.

### **🔹 List & Tuple Operations**

1. How to remove duplicates from a list?
2. Write a program to show all even numbers from 1 to 100 using a while loop.
3. 3 Differences between delete and pop() in list.
4. Access elements from a tuple in 3 different ways.
5. 4 ways to create a tuple.
6. List 5 built-in methods of tuples and explain their use with real-world examples.

### **🔹 Dictionary & Data Types**

1. Mention key methods of dictionary, list, set, tuple, and string.
2. Mention use cases or checkpoints when to use:  
   * List vs Tuple
   * Set vs Dictionary

### **🔹 Object-Oriented Programming**

1. Create a class with attributes and methods.
2. What is the purpose of the \_\_init\_\_ constructor in a class?
3. Difference between **method** and **constructor** in Python.

### **🔹 Logical Programs**

1. Write a Python program to check if a number is prime or not.
2. Lottery Problem: Reverse a 3-digit number.  
   * Input: 123
   * Output: 321
3. Pages Reading Pattern Problem:  
   * Week 1: 20 pages/day
   * Week 2: +5 pages/day
   * Continue pattern for 30 days
   * Output: Total pages read = 1200

### **🔹 Theory**

1. What is **bias** and **variance**?
2. What is **bias-variance tradeoff** in machine learning?

## **✅ POWER BI QUESTIONS**

1. What is the difference between MAX() and MAXA()?
2. What is the difference between SUM() and SUMX()?
3. Write a measure for calculating **average** and **averagex** in Power BI.
4. Real-world use case where you prefer SUMX over SUM.