1. What is Python, and why is it popular?
   ➔ Python is a high-level, interpreted, general-purpose programming language known for its simple syntax and readability. It is popular due to its ease of learning, extensive libraries, cross-platform support, strong community, and wide use in areas such as data science, AI, web development, and automation.

2. What is an interpreter in Python?
   ➔ An interpreter in Python is a program that executes Python code line by line, converting it into machine-readable instructions at runtime.

3. What are pre-defined keywords in Python?
   ➔ Pre-defined keywords in Python are reserved words that have special meanings and cannot be used for other purposes (e.g., if, else, for, while, def, class, return).

4. Can keywords be used as variable names?
   ➔ No, keywords cannot be used as variable names because they are reserved for specific syntactic functions in Python

5. What is mutability in Python?
   ➔ Mutability in Python refers to the ability of an object to be changed after it is created.

6. Why are lists mutable, but tuples are immutable?
   -> Lists are mutable because they are designed to allow modification of elements, whereas tuples are immutable to ensure data integrity, improve performance, and allow safe usage as dictionary keys.

7. What is the difference between “==” and “is” operators in Python?
   -> The == operator checks for value equality, while the is operator checks whether both variables refer to the same object in memory.

8. What are logical operators in Python?
   -> Logical operators in Python are and, or, and not, used to combine or negate conditional expressions.

9. What is type casting in Python?
   ->Type casting in Python is the process of converting one data type into another (e.g., int(), float(), str()).

10. What is the difference between implicit and explicit type casting?
    ->Implicit type casting is done automatically by Python without user intervention, whereas explicit type casting is performed manually by the programmer.

11. What is the purpose of conditional statements in Python?
    -> The purpose of conditional statements in Python is to execute different blocks of code based on whether certain conditions are true or false.

12. How does the elif statement work?
    -> The elif statement allows checking multiple conditions sequentially; if the preceding if or elif condition is false, the next elif condition is evaluated.

13. What is the difference between for and while loops?
    -> A for loop is used when the number of iterations is known or fixed, while a while loop is used when the number of iterations depends on a condition.

14. escribe a scenario where a while loop is more suitable than a for loop.
    -> A while loop is more suitable when repeatedly taking user input until a valid input is provided or when the loop must run until a specific condition becomes false.