Q1. What is the purpose of the try statement?

To handle exceptions and errors in a controlled manner. It allows us to enclose a block of code that may raise exceptions and specify how to handle those exceptions using one or more except blocks. This helps us to prevent the program from crashing and allows error handling and recovery.

Q2. What are the two most popular try statement variations?

try-except: In this variation we try to catch and handle specific exceptions that may occur within the try block. It allows us to define separate exception handling code for different types of exceptions.

try-finally: In this variation we ensures that a particular block of code within the try block is always executed, regardless of whether an exception occurs or not. It mainly used for cleanup operations or releasing resources .

Q3. What is the purpose of the raise statement ?

raise statement is to cause an exception to occur at a specific point in the code. It allows us to signal and handle errors or exceptional conditions in our program.

Q4. What does the assert statement do, and what other statement is it like?

assert statement is used to check assumptions about the program's state and raise an assertion error if those assumptions are not met, helps in debugging and testing.

Q5. What is the purpose of the with/as argument, and what other ."statement is it like?

It help us to manage resources, such as files or other resources, in a clean and efficient way. The with statement automatically sets up the resources before the code block and ensures proper cleanup afterward, even if exceptions occur. It is like or similar to the try/finally statement, but we can say more specifically designed for resource management.