1. **Explain dynamically typed languages?**

Ans. Dynamically typed languages are programming languages where the type of a variable is determined at runtime rather than at compile time. This means that you don't need to declare the type of a variable explicitly — the interpreter figures it out based on the value assigned. This flexibility makes dynamically typed languages easier and faster to write, especially for scripting, prototyping, and tasks where rapid development is key. Common examples include Python, JavaScript, Ruby, PHP, and R. While they offer convenience and cleaner syntax, they may lead to runtime errors that would otherwise be caught earlier in statically typed languages.

2. **Can you define what is a python?**

Ans. Python is a high-level, interpreted, and dynamically typed programming language known for its readability and simplicity. It was created by Guido van Rossum and first released in 1991. Python supports multiple programming paradigms, including procedural, object-oriented, and functional programming. It is used in a wide range of applications such as web development, data science, machine learning, automation, scripting, and more.

3. **Elaborate the difference between list and tuple?**

Ans. List: A list in Python is a mutable, ordered collection of elements. You can change, add, or remove elements after the list is created. Lists are defined using square brackets []. They can hold elements of any data type and can grow or shrink in size.

Tuple: A tuple is similar to a list but is immutable, meaning once created, its elements cannot be modified, added, or removed. Tuples are defined using parentheses (). Tuples are typically used to store fixed collections of data.

4. **Explain the benefits of using python**

Ans. Python is a popular high-level programming language known for its simplicity and versatility. One of the main benefits of using Python is its easy-to-read syntax, which closely resembles plain English, making it ideal for beginners and experienced developers alike. Being an interpreted and dynamically typed language, Python allows developers to write and run code without worrying about declaring variable types, which speeds up the development process. It supports multiple programming paradigms, including procedural, object-oriented, and functional programming. Python also has a vast collection of libraries and frameworks, which significantly reduce development time. Python offers excellent support and resources for solving problems and continuous learning, making it one of the most efficient and developer-friendly languages available today.