1)What is python? Why is it so popular?

Python is an interpreted high-level general-purpose programming language. The python language is one of the most accessible programming languages available because it has simplified syntax and not complicated, which gives more emphasis on natural language. Due to its ease of learning and usage, python codes can be easily written and executed much faster than other programming languages. It uses a simplified syntax with an emphasis on natural language, for a much easier learning curve for beginners. And, because Python is free to use and is supported by an extremely large ecosystem of libraries and packages, it’s often the first-choice language for new developers. Very good quality of documentation, which is reflected in the efficiency of working with the language.

Python is independent of the platform used.

The language is very simple, and beginners can learn it very quickly.

The language supports a whole bunch of libraries, which is important in the context of creating complex and diverse applications.The language is efficient, portable (running on different platforms), and simple design, which has a significant impact on the work with IT.It can be used to create a variety of applications, including web, scientific and mathematical tools.

2)What are the key features of python?

Python is an easy language. It is easy to read, write, learn and understand. The Python language is designed to make developers life easy. Reading a Python code is like reading an English sentence. Python uses indentation instead of curly braces, unlike other programming languages. This makes the code look clean and easier to understand.

Python is an interpreted language. It comes with the IDLE (Interactive Development Environment). This is an interpreter and follows the REPL structure (Read-Evaluate-Print-Loop). It executes and displays the output of one line at a time.

Python is not statically-typed like Java. You don’t need to declare data type while defining a variable. Python is object-oriented but supports both functional and object-oriented programming. Everything in Python is an object.

The standard library is large and has any **packages** and **modules** with common and important functionality.

3) What type of language is python-programming or scripting?

Python is an interpreted language. Python uses an interpreter to translate and run its code. Hence Python is a scripting language.

4)What is pep 8?

PEP 8, sometimes spelled PEP8 or PEP-8, is a document that provides guidelines and best practices on how to write Python code. It was written in 2001 by Guido van Rossum, Barry Warsaw, and Nick Coghlan. The primary focus of PEP 8 is to improve the readability and consistency of Python code. PEP stands for Python Enhancement Proposal.

5)Python is an interpreted language. Explain

Python is an interpreted language, which means the source code of a Python program is converted into bytecode that is then executed by the Python virtual machine. Python is different from major compiled languages, such as C and C + +, as Python code is not required to be built and linked like code for these languages.

Python is called an interpreted language because it goes through an interpreter, which turns code you write into the language understood by your computer’s processor. Later on when you work on a project on your own computer, you will download and use the Python interpreter to be able to write Python code and execute it on your own.

6)How is memory managed in python?

Steps in managing memory in Python are -

The Python memory is primarily managed by Python private heap space.

All Python objects and data structures are located in a private heap.

The programmer does not have access to this private heap and interpreter takes care of this Python private heap.

The allocation of Python heap space for Python objects is done by Python memory manager.

The core API gives access to some tools for the programmer to code.

Python has an inbuilt garbage collector, that recycles all the unused memory and frees the memory and makes it available to the heap space.

7) What is namespace in python?

A namespace is a system that has a unique name for each and every object in Python. An object might be a variable or a method. Python itself maintains a namespace in the form of a Python dictionary. In python, there are four types of namespaces, namely built-in namespaces , global namespaces, local namespaces and enclosing namespaces.