**20 Python interview Question with Answers**

Q1. What is Python?

Python is a high-level, interpreted, general-purpose programming language that can be used to build almost every type of application with the right tools/libraries. Python supports objects, modules, threads, exception-handling, and automatic memory management that help in displaying real-world problems and designing applications to solve them

Q2. Explain why Python is an Interpreted Language

Interpreted programming languages are those that are not machine-level code before execution. Python is designed as an interpretive language.

Q3. State the difference between lists and tuples in Python programming.

|  |  |
| --- | --- |
| List in Python. | Tuples in Python. |
| Lists are editable, which is mutable. | A tuple is a list that cannot be altered, which is immutable. |
| Slower. | Faster |

Q4. What exactly are Python libraries? List a few.

Python libraries are a grouping of Python packages. A few of the most popular python libraries are NumPy, Pandas, Matplotlib, Scikit-learn, and many other tools.

Q5. Positive indices: what are they, and why do they exist?

Lists, tuples, and strings with negative indexes are at the end of the list.

Arr[-1] is the last element of array Arr[]. As well, prepare a sample.

Q6. What is Python's lambda structure?

In addition, you can be asked about advanced Python in a job interview. The lambda catch is used to create small, erratic, cryptic expendable capacity.

Q7. What is the difference between Java and Python?

It is a common python interview question to check whether you know the differences. Python uses a dynamically built information type, whereas Java uses a static information type.

Q8. Recognize the differences between new and override modifiers.

The new modifier tells the compiler that the new implementation should be used instead of the base class function. Within a child class, the override modifier can be used to override a base class function.

Q9. In Python, distinguish between a package and a module.

This is a fundamental question in python interview questions. A single python file makes up the module. Other modules (python files) can be imported as objects by a module. On the other hand, a package is a folder or directory that contains many sub-packages and modules.

Q10. Mention some popular applications of Python.

Python is the most well-accepted, general-purpose, high-level programming language created by Guido van Rossum. This highly readable programming language allows programmers to write the instructions for developing programs and applications for:

* Web Development
* Software Development
* Data science
* System Scripting
* Complex Mathematics
* Game Development

Q11. What is the use of a pass statement in Python?

Pass statement is a null statement that does not perform anything. The pass statement uses the pass keyword that acts as a placeholder and instructs the compiler not to do anything. It is implemented when the programmer doesn’t want any code to execute. So, programmer simply uses the pass there as empty code within function definitions, loops, decision-making statement body, class definitions, or in other blocks or suits.

Q12.What are operators?  
Operators are required to perform various operations on data. They are special symbols that are required to carry out arithmetic and logical operations. The values on which the operator operates are called operands.  
So, if we say 10/5=2  
Here 7’ is the operator that performs division and 10 and 5 are the operands. Python has the following operators defined for various operations:

1. Arithmetic Operators
2. Relational Operators
3. Logical/Boolean Operators
4. Assignment Operators
5. Bitwise Operators
6. Membership Operators
7. Identity Operators

Q13.What are Python Iterators?

Python iterators help in iterating any object containing a collection of elements. Iterators are the group of items, which can be implemented on any iterable object like lists, tuples, or dictionaries. The iterator in Python implements \_\_itr\_\_ and the next() method for iterating the stored elements. Python iterator generally implements the loops for iterating over the collections (lists and tuples).

Q14.What is a nesting of a list?

Creating or declaring a List object within another list is called the nesting of a list. Let suppose, you have a variable li. Then we can create a collection of lists within the li list.

**E.g**. li = [[2, 4, 5], [10, 13, 25]], where [2, 4, 5] is a list and [10, 13, 25] are nested lists residing within the li object.

Q15.How is memory managed in Python?

Python Memory Manager handles memory management in Python. The memory is allocated by the manager in the form of private heap space for Python. All Python objects stored in this heap are private. Hence, it is inaccessible to the programmer until the time Python provides some core API functions to work upon the private heap space.

Q16. What are Decorators in Python?

A decorator is a design pattern used in Python to allow the users in terms of adding new functionality to an existing object without modifying its structure. Usually, Decorators should be called before you define a function you want to decorate.

Q17. What are the common built-in data types in Python?

There are several built-in data types in Python. Some of them are as follows:

* None Type
* Numeric Type
* Sequence type
* Mapping Type
* Set Type
* Modules
* Callable types

Q18.What are Python Namespaces?

A namespace is a feature of Python that makes sure that the object names in a program are unique and can be used without any conflict. Namespaces as dictionaries are also called 'name as a key' mapped to a corresponding 'object as value'. This allows for multiple namespaces to use the same name and map it to a separate object.

Q19. How many Python Namespaces are there?

There are 3 types of Python Namespaces:

* Local Namespace
* Global Namespace
* Built-in Namespace

Q20.What are *break* and *continue* statements?

*break* – the break statement is used to terminate the running loop. The execution of the code will jump to the outside of the break loop.

*continue* – the continue statement is used to skip the execution of the remaining code. The code after the continue statement doesn’t execute in the current iteration, and the execution goes to the next iteration.