[**Q.1   Mention what are the rules for local and global variables in Python?**](javascript:%20void(0))

**Local variables**: If a variable is assigned a new value anywhere within the function's body, it's assumed to be local.

**Global variables**: Those variables that are only referenced inside a function are implicitly global.

[**Q.2   What Is A Function In Python Programming?**](javascript:%20void(0))

A function is an object which represents a block of code and is a reusable entity. It brings modularity to a program and a higher degree of code reusability.

Python has given us many built-in functions such as print() and provides the ability to create user-defined functions.

[**Q.3   Is It Mandatory For A Python Function To Return A Value?**](javascript:%20void(0))

 It is not at all necessary for a function to return any value. However, if needed, we can use None as a return value.

[**Q.4   What is \*args and \*\*kwargs?**](javascript:%20void(0))

\*args is used when the programmer is not sure about how many arguments are going to be passed to a function, or if the programmer is expecting a list or a tuple as argument to the function.

\*\*kwargs is used when a dictionary (keyword arguments) is expected as an argument to the function.

[**Q.5   What is different between List and Tuple?**](javascript:%20void(0))

**Lists** and **Tuples**store one or more objects or values in a specific order.   
The objects stored in a list or tuple can be of any type including the nothing type defined by the None Keyword.

The main difference between lists and a tuples is the fact that lists are **mutable**whereas tuples are **immutable**.

1. The literal syntax of tuples is shown by parentheses () whereas the literal syntax of lists is shown by square brackets [] .
2. Lists has variable length, tuple has fixed length.
3. List has mutable nature, tuple has immutable nature.
4. List has more functionality than the tuple.

[**Q.6   What is dictionary in Python?**](javascript:%20void(0))

Python dictionary is an unordered collection of items. While other compound data types have only value as an element, a dictionary has a key: value pair.

Dictionaries are optimized to retrieve values when the key is known.

**How to create a dictionary?**

Creating a dictionary is as simple as placing items inside curly braces {} separated by comma.

An item has a key and the corresponding value expressed as a pair, key: value.

[**Q.7   What are the built-in type does python provides?**](javascript:%20void(0))

There are mutable and Immutable types of Pythons built in types  
**Mutable built-in types**

1. List
2. Sets
3. Dictionaries

**Immutable built-in types**

1. Strings
2. Tuples
3. Int
4. Float
5. Boolean

**Q.8** **What does immutable mean and what three types of Python core data types are considered immutable?**

An immutable data type is a type of object which cannot be modified after its creation. Numbers, strings, and tuples in Python fall into this category. Although you cannot modify an immutable object in place, you can always create a new one by running an expression.

[**Q.9   What are types of Operator are used in Python?**](javascript:%20void(0))

* Arithmetic Operators
* Comparison Operators
* Python Assignment Operators
* Logical Operators or Bitwise Operators
* Membership Operators
* Identity Operators

**Q.10 What is the use of the // operator in Python?**

Using the // operator between 2 numbers gives the quotient when the numerator is divided from the denominator. It is called the Floor Division operator. It is one of the general questions from the Python interview questions and answers guide.

**Q.11 Before the use of the ‘in’ operator, which method was used to check the presence of a key in a dictionary?**

The has\_key() method

**Q.12 Explain the functions of “is,” “not,” and “in” operators?**

Again, one of the popular python interview questions. Operators are special functions in Python that can take one or more values to produce a corresponding result.

* The “is” operator returns true when two operands are true.
* The “not” operator returns the inverse of the boolean value.
* The “in” operator checks if some element is present in some sequence.

**[Q.13   How does For loop and While loop differ in Python and when do you choose to use them?](javascript:%20void(0))**

For loop is generally used to iterate through the elements of various collection types such as List, Tuple, Set, and Dictionary.

While loop is the actual looping feature that is used in any other programming language. This is how Python differs in handling loops from the other programming languages.

[**Q.14   What Is A Built-In Function That Python Uses To Iterate Over A Number Sequence?**](javascript:%20void(0))

Range() generates a list of numbers, which is used to iterate over for loops.

The range() function accompanies two sets of parameters.

range(stop)

stop: It is the no. of integers to generate and starts from zero. eg. range(3) == [0, 1, 2].

range([start], stop[, step])

Start: It is the starting no. of the sequence.

Stop: It specifies the upper limit of the sequence.

Step: It is the incrementing factor for generating the sequence.

#### Q. 15 When is the code in else executed with while and for loops?

The code inside the else block with while and for loops is executed after executing all iterations. And the code inside the else block doesn’t execute when we break the loops.

## **Q.16 Explain The Infinite Loop.**

A loop becomes infinite loop if a condition never becomes FALSE. You must use caution when using while loops because of the possibility that this condition never resolves to a FALSE value. This results in a loop that never ends. Such a loop is called an infinite loop.

**Q.17 How are if, elif, and else blocks defined?**

All blocks in Python are defined by indenting. All lines of a particular code block must have the same level of indenting.

## **Q.18 What is the difference between IF ELSE and ELSE IF ladder?**

It tells the code what to do when the if condition is false. The if-else-if ladder statement executes one condition from multiple statements. The statement of if block will be executed which evaluates to be true. If none of the if condition evaluates to be true then the last else block is evaluated.

## **Q.19 How is if statement is different from the IF ELSE statement?**

The if statement is a decision-making structure that consists of an expression followed by one or more statements. The if else is a decision-making structure in which the if statement can be followed by an optional else statement that executes when the expression is false.

[**Q.20   What Is The Difference Between Pass And Continue In Python?**](javascript:%20void(0))

The continue statement makes the loop to resume from the next iteration.

On the contrary, the pass statement instructs to do nothing, and the remainder of the code executes as usual.