**1.What are functions in Python?**

A function is a block of code which is executed only when a call is made to the function. def keyword is used to define a particular function as shown below:

def function():

print("Hi, Welcome to Intellipaat")

function(); # call to the function

Output:

Hi, Welcome to Intellipaat

**2. What is a dictionary in Python?**

Python dictionary is one of the supported data types in Python. It is an unordered collection of elements. The elements in dictionaries are stored as key–value pairs. Dictionaries are indexed by keys.

For example, below we have a dictionary named ‘dict’. It contains two keys, Country and Capital, along with their corresponding values, India and New Delhi.

Syntax:

dict={‘Country’:’India’,’Capital’:’New Delhi’, }

Output: Country: India, Capital: New Delhi

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

Python supports the below-mentioned built-in data types:

Immutable data types:

Number

String

Tuple

Mutable data types:

List

Dictionary

set

**4. How can you randomize the items of a list in place in Python?**

This can be easily achieved by using the Shuffle() function from the random library as shown below:

from random import shuffle

List = ['He', 'Loves', 'To', 'Code', 'In', 'Python']

shuffle(List)

print(List)

Output: [‘Loves’,’He’ ,’To ,’In’, ‘Python’,’Code’]

**5. What is a map function in Python?**

The map() function in Python has two parameters, function and iterable. The map() function takes a function as an argument and then applies that function to all the elements of an iterable, passed to it as another argument. It returns an object list of results.

For example:

def calculateSq(n):

return n\*n

numbers = (2, 3, 4, 5)

result = map( calculateSq, numbers)

print(result)

**6. Do we need to declare variables with data types in Python?**

No. Python is a dynamically typed language, I.E., Python Interpreter automatically identifies the data type of a variable based on the type of value assigned to the variable.

**7. How will you remove duplicate elements from a list?**

To remove duplicate elements from the list we use the set() function.

Consider the below example:

demo\_list=[5,4,4,6,8,12,12,1,5]

unique\_list = list(set(demo\_list))

output:[1,5,6,8,12]

**8.What is the purpose of is, not and in operators?**

Operators are referred to as special functions that take one or more values(operands) and produce a corresponding result.

is: returns the true value when both the operands are true (Example: “x” is ‘x’)

not: returns the inverse of the boolean value based upon the operands (example:”1” returns “0” and vice-versa.

In: helps to check if the element is present in a given Sequence or not.

**9.How will you convert a string to all lowercase?**

lower() function is used to convert a string to lowercase.

For Example:

demo\_string='ROSES'

print(demo\_string.lower())

**10. What is the lambda function in Python?**

A lambda function is an anonymous function (a function that does not have a name) in Python. To define anonymous functions, we use the ‘lambda’ keyword instead of the ‘def’ keyword, hence the name ‘lambda function’. Lambda functions can have any number of arguments but only one statement.

For example:

l = lambda x,y : x\*y

print(a(5, 6))

**11. What is slicing in Python?**

Slicing is a process used to select a range of elements from sequence data type like list, string and tuple. Slicing is beneficial and easy to extract out the elements. It requires a : (colon) which separates the start index and end index of the field. All the data sequence types List or tuple allows us to use slicing to get the needed elements. Although we can get elements by specifying an index, we get only a single element whereas using slicing we can get a group or appropriate range of needed elements.

Syntax:

List\_name[start:stop]

**12. Which one of the following is not the correct syntax for creating a set in Python?**

set([[1,2],[3,4],[4,5]])

set([1,2,2,3,4,5])

{1,2,3,4}

set((1,2,3,4))

Ans.

set([[1,2],[3,4],[4,5]])

Explanation: The argument given for the set must be iterable.

**13. What is the difference between / and // operator in Python?**

/: is a division operator and returns the Quotient value.

10/3

3.33

// : is known as floor division operator and used to return only the value of quotient before decimal

10//3

3

**14. What is the difference between list and tuples in Python?**

Lists are mutable, but tuples are immutable.

**15. What is dictionary in Python? Give an example.**

A Python dictionary is a collection of items in no particular order. Python dictionaries are written in curly brackets with keys and values. Dictionaries are optimised to retrieve value for known keys.

Example

d={“a”:1,”b”:2}

**16. How do you get a list of all the keys in a dictionary?**

One of the ways we can get a list of keys is by using: dict.keys()

This method returns all the available keys in the dictionary. dict = {1:a, 2:b, 3:c} dict.keys()

o/p: [1, 2, 3]

**17. What are the different types of operators in Python?**

Python has the following basic operators:

Arithmetic( Addition(+), Substraction(-), Multiplication(\*), Division(/), Modulus(%) ), Relational ( <, >, <=, >=, ==, !=, ),

Assignment ( =. +=, -=, /=, \*=, %= ),

Logical ( and, or not ), Membership, Identity, and Bitwise Operators

**18. What is the difference between tuple and dictionary?**

One major difference between a tuple and a dictionary is that dictionary is mutable while a tuple is not. Meaning the content of a dictionary can be changed without changing it’s identity, but in tuple that’s not possible.

**19. What does len() do?**

len() is used to determine the length of a string, a list, an array, and so on. ex: str = “greatlearning”

print(len(str))

o/p: 13

**20. How can you capitalize the first letter of a string?**

We can use the capitalize() function to capitalize the first character of a string. If the first character is already in capital then it returns the original string.

Syntax: string\_name.capitalize() ex: n = “greatlearning” print(n.capitalize())

o/p: Greatlearning