



# Python

## Interview Questions

1. Suppose there are two sets, set1 and set2, where set1 is the superset of set2. It is required to get only the unique elements of both the sets. Which of the following will serve the purpose?

set1= {2,3}

set2= {3,2}

set3= {2,1}

```
if(set1==set2):
```

```
    print("yes")
```

```
else:
```

```
    print("no")
```

```
if(set1==set3):
```

```
    print("yes")
```

```
else:
```

```
    print("no")
```

A. set1|set2

B. set1&set2

C. set1-set2

D. None of the above

Ans: C

Explanation: set1-set2 will serve the purpose.

2. The elements of a list are arranged in descending order. Which of the following two will give same outputs?

- i. `print(list_name.sort())`
- ii. `print(max(list_name))`
- iii. `print(list_name.reverse())`
- iv. `print(list_name[-1])`

- A. i, ii
- B. i, iii
- C. ii, iii
- D. iii, iv

Ans: B

Explanation: `print(list_name.sort())` and `print(list_name.reverse())` will give same outputs.

3. What will be the output of below Python code?

```
list1=[1,3,5,2,4,6,2]
list1.remove(2)
print(sum(list1))
```

- A. 18
- B. 19
- C. 21
- D. 22

Ans: C

Explanation: 21 will be the result after the execution of above Python code.

4. Which of the following would give an error?

- A. list1 = []
- B. list1= [] \*3
- C. list1= [2,8,7]
- D. None of the above

Ans: D

Explanation: None of the above will result in error

5. What is type conversion in python?

Ans - When we perform any operation on variables of different datatypes, the data of one variable will be converted to a higher datatype among the two variables and the operation is completed. When this conversion is done by interpreter automatically then it is known as implicit type conversion while conversions is done by user then it is called explicit type conversion.

```
num1=10
num2="20"
result=num1+int(num2)
print(result)
```

6. When we want to treat some data as a group, it would not be good to create individual variables for each data. We can store them together as a collection.

Ans- There are many collection data types which are supported by Python-

1. List- List can be used to store a group of elements together in a sequence.

2. Tuple- A tuple is an immutable sequence of Python objects. Tuples are sequences, just like lists.
3. String- In a program, not all values will be numerical. We will also have alphabetical or alpha numerical values. Such values are called strings.
4. Set- A set is an unordered group of values with no duplicate entries. Set can be created by using the keyword set or by using curly braces {}. set function is used to eliminate duplicate values in a list.
5. Dictionary- A dictionary can be used to store an unordered collection of key-value pairs. The key should be unique and can be of any data type. Like lists, dictionaries are mutable.

7. What is math module?

Answer - math is another useful module in Python. Once you have imported the math module, you can use some of the below functions:

1. math.ceil(x) - Smallest integer greater than or equal to x
2. math.floor(x) - Largest integer smaller than or equal to x
3. math.factorial(x) - Factorial of x
4. math.fabs(x) - Gives absolute value of x

8. What are the differences between python 2 and 3?

Answer -The main differences between python 2 and python 3 are as follows -

python 2	python 3
a) print statement is treated more as statement	print statement is treated more as statement
b) integer size limited to 32 bits	integer size unlimited

c) complex	Simplified
d) ASCII is used.	Unicode is used.

9. What are docstrings in Python?

Answer - Docstrings are not actually comments, but they are documentation strings. These docstrings are within triple quotes. They are not assigned to any variable and therefore, at times, serve the purpose of comments as well.

"""

Using docstring as a comment.

This code divides 2 numbers

"""

a=10

b=5

c=a/b

print(c)

Output -

2.0

10. What is `__init__` in Python?

Answer - "`__init__`" is a reserved method in python classes. It is called as a constructor in object-oriented terminology. This method is called when an object is created from a class and it allows the class to initialize the attributes of the class.

11. Does Python have Opp's concepts?

Ans - Python is an object-oriented programming language. This means that any program can be solved in python by creating an

object model. However, Python can be treated as procedural as well as structural language.

12. How will you capitalize the first letter of string?

Ans- In Python, the `capitalize()` method capitalizes the first letter of a string. If the string already consists of a capital letter at the beginning, then, it returns the original string.

13. Why we use Lambda Functions?

Ans - Lambda functions are used when you need a function for a short period of time. This is commonly used when you want to pass a function as an argument to higher-order functions, i.e. functions that take other functions as their arguments.

14. What is Exception handling in python?

Ans - Sometimes the programs may misbehave or terminate/crash unexpectedly due to some unexpected events during the execution of a program. These unexpected events are called as exceptions and the process of handling them to avoid misbehaviour or crashing the program is called as exception handling.

15. What are functions in python?

Ans - Functions are set of instructions to perform a specific task.

Below is the syntax of functions in python.

```
def function_name ([arg1, ..., argn]):  
    #statements  
    [return value]  
variable_name = function_name ([val1, ..., valn])
```

16. How many types of arguments are there in python?

Ans- Programming languages allow controlling the ordering and default values of arguments.

1. Positional Default way of specifying arguments. In this, the order, count and type of actual argument should exactly match to that of formal argument. Else, it will result in error.

```
def function_name (arg1, arg2):
```

```
#statements
```

```
return result
```

```
res = function_name (val1, val2)
```

2. Keyword: Allow flexibility in order of passing actual arguments by mentioning the argument name.

```
def function_name (arg1, arg2):
```

```
#statements
```

```
return result
```

```
res = function_name (arg2=val2, arg1=val1)
```

3. Default: Allow to specify the default value for an argument in the function signature. It is used only when no value is passed for that argument else it works normally. In python default arguments should be last in order.

```
def function_name (arg1, arg2=default value):
```

```
#statements
```

```
return result
```



```
res = function_name(val1)
```

4. Variable argument count: Allow function to have variable number of arguments. In python, any argument name starting with '\*' is consider to be vary length argument. It should be last in order. It will copy all values beyond that position into a tuple.

```
def function_name (arg1, arg2, *arg3):  
#statements  
return result  
res = function_name (val1, val2, val3, val4, val5)
```

17. What is random module?

Answer -Python has many inbuilt packages and modules. One of the most useful modules is random. This module helps in generating random numbers.

The code given below generates a random number between x and y-1 (both inclusive) using the randrange function of the random module.

```
import random  
a=20  
b=30  
print(random. randrange (a, b))  
output:  
Any random number between 20 to 30.
```

18. What is seek() function in python?

Answer - Python provides seek() function to navigate the file object pointer to the required position specified.

Syntax: file\_object. seek(offset, [whence])

//file\_object indicates the file object pointer to be navigated

//offset indicates which position the file object pointer is to be navigated

19. What is PEP 8??

Ans- PEP 8 is a coding convention, a set of recommendations, about how to write your Python code more readable.

20. What is pickling and unpickling in Python?

Ans- Pickling is a way to convert a python object (list, dict, etc.) into a character stream. Pickle has two main methods. The first one is dump, which dumps an object to a file object and the second one is load, which loads an object from a file object.

While the process of retrieving original Python objects from the stored string representation is called unpickling.