

python interview questions and answers pdf

1)what is python?

Python is a widely used high-level interpreted language.

2)What are the advantages of Python Language?

Python is an interpreted, high-level programming language that emphasizes code readability and maintainability. It has a large community of developers who are constantly creating tools and libraries to make Python easier to use. Additionally, the language has several features that make it well-suited for data analysis, machine learning, and scientific computing.

3)What are the key features of Python?

Python has several key features that make it well-suited for data analysis, machine learning, and scientific computing. Some of these features include:

- * A high-level language syntax that is easy to read and understand.
- * An extensive standard library which contains libraries for common tasks such as string manipulation, network programming, and data analysis.
- * The ability to create custom modules which can be used in your programs. This allows you to extend the functionality of Python without needing to write code from scratch.
- * A built-in process management system which allows you to easily take care of tasks such as running scripts or managing files.

4)What libraries are available in the Python Standard Library?

The Python Standard Library includes a wide range of libraries for data analysis, machine learning, scientific computing, and more. Some of the most popular libraries include NumPy, Pandas, matplotlib, and scikit-learn.

5)What is the difference between a script and a program in Python?

A script is a collection of code that you can run directly on your computer. Programs, on the other hand, are scripts that have been compiled into executables which you can run on your machine.

6)What are some common uses for Python?

Python is used extensively in data analysis, machine learning, and scientific computing. Some of the most popular applications include:

- * Data cleaning and preparation - Python provides tools for data pre-processing such as filtering, splitting(), joining(), etc. This allows you to easily work with complex data sets.
- * Modeling and forecasting - Python is well-suited for building predictive models and forecasting. Its built-in libraries provide a wide range of tools for modeling and analysis, making it easy to tackle complex problems.

* Scientific computing - Python is a popular language for scientific computing due to its high level syntax, extensive standard library, and process management system. This allows you to easily take care of tasks such as running scripts or managing files.

7) What is the difference between an expression and a statement in Python?

An expression is a type of statement that represents a value. For example, the `print()` function prints text to your screen as an expression. Statements are all of the other types of statements in Python such as `if()`, `for()`, `while()`, etc.

8) What are some common data structures in Python?

There are several common data structures used in Python including lists, dictionaries, sets, and tuples. Each has its own unique properties that can make working with data more efficient and manageable.

9). How can we check if a number is prime or composite in Python?

```
def isPrime(n):  
    if n%2==0:  
        return True  
    else:  
        return.
```

10). Write a program to calculate the "factorial of 5" using recursion.

This is one of the example questions on Data Structures and Algorithms section, which deals with recursion and dynamic programming techniques (such as backtracking). The program should return the value 120, as follows:

```
def factorial(n):  
    if n > 1: return n * (n-1)  
    return def factorial2(n): if n <= 0: print("Incorrect input") else: returnFactorial((1-n)*factorial(n))
```

11) What are python modules? Name some commonly used built-in modules in Python?

Python modules are a way of grouping related code together, so that it can be easily found and accessed. Some common built-in modules in Python include `sys`, `os`, `math`, `collections`, `logging` and `wheel`.

12) What are local variables and global variables in Python?

Local variables are variables that are specific to a function or block of code. Global variables are variable that can be accessed by both the function or block of code in which they were created and any other functions or blocks in the same Python program.

13) What is the difference between a string and a list in Python?

A string is just an array of characters, while a list is a type of container that can hold other objects as well. Strings are usually simple arrays of characters, while lists can be more complex structures including pairs (two elements), tuples (three elements), or dictionaries (a collection of key/value pairs).

14)What does the def keyword do in Python?

The def keyword allows you to define functions inside of another function. This makes it easy to group related code together and access it later.

15)Why is it important to use good programming practices when writing in Python?

Python is a high-level language, which means that it is easy to read and write. However, bad programming practices can lead to code that is difficult to understand and maintain. It's important for programmers to follow best practices such as naming conventions, using consistent indentation levels, and avoiding global variables whenever possible.

16)In Python, what are local and global variables?

Local variables are variables that are only accessible within the current block of code. Global variables are variables that can be accessed from anywhere in the program.

17) How can you randomize the items of a list in place in Python?

```
def randomize(list):  
    for i in range(0, len(list) - 1):  
        list[i] = randint(-1, 1) return list
```

18) What is the difference between a function and a method in Python?

A function is just a named block of code, while methods are special objects that represent functions. Methods can be defined inside other classes or modules, and they can take one or more arguments.

19)In Python, what is an identifier?

An identifier is a string that you use to uniquely identify a variable, function, or script. You create identifiers by giving them a name and assigning it to a variable.

20)What is a lambda function?

A lambda function is a function that takes one or more arguments.

21)What distinguishes range from xrange?

Range is a built-in function in Python that generates a list of numbers from 0 to max - 1, while xrange is an advanced keyword. Range takes one argument,max, and returns a list containing the numbers from min until max. Contrast this with xrange which requires two arguments: start and end. xrange starts at the value given as start and extends to the value given as end.

22)In Python, how can you create random numbers?

The random module in Python provides a convenient interface to the RAND() function, which generates pseudo-random numbers.

23)In Python, how do you comment on multiple lines?

In Python, you can use a comment character (in curly brackets) to indicate that the following text is not intended to be interpreted as code.

Instead, it is simply text that you want to be displayed by the interpreter or parser. For example, this code

```
print("This is a comment")
```

will print "This is a comment" on one line and nothing else.

24) What is the difference between a string and a list in Python?

A string can be either immutable (once it's created, it cannot be changed) or mutable (you can change its contents). Strings are always composed of characters, while lists are made up of elements that can be any type.