Assignment Questions And Answers

1. Who developed Python Programming Language?

Ans: It was created by **Guido van Rossum**, and released in **1991**.

2. Which type of Programming does Python support?

Ans: Python is an interpreted, interactive, object-oriented programming language. It incorporates modules, exceptions, dynamic typing, very high level dynamic data types, and classes. It supports multiple programming paradigms beyond object-oriented programming, such as procedural and functional programming.

3. Is Python case sensitive when dealing with identifiers?

Ans: Yes, Python is a case-sensitive language when dealing with identifiers.

4. What is the correct extension of the Python file?

Ans: The correct extension of the Python file is **.py**

5. Is Python code compiled or interpreted?

Ans: Python is both compiled as well as an interpreted language. This means when we run a python code, it is first compiled and then interpreted line by line

6. Name a few blocks of code used to define in Python language?

Ans: Python program to check if year is a leap year or not

year = int(input("Enter a year: "))

if (year % 400 == 0) and (year % 100 == 0):

print("{0} is a leap year".format(year))

elif (year % 4 ==0) and (year % 100 != 0):

print("{0} is a leap year".format(year))

else:

print("{0} is not a leap year".format(year))

7. State a character used to give single-line comments in Python?

Ans: We can write a single-line comment by adding a single # character before any statement or line of code.

8. Mention functions which can help us to find the version of python that we are currently working on?

Ans: To get the Version of the python Interpreter, they are listed as follows:

Using sys.version method

Using python\_version() function

Using Python -V command

9. Python supports the creation of anonymous functions at runtime, using a construct called \_\_\_\_\_\_\_.

Ans: Lambda

10. What does pip stand for python?

Ans: pip stands for "preferred installer program".

11. Mention a few built-in functions in python?

Ans: print( ) function,type( ) function,input( ) function,abs( ) function,pow( ) function,dir( ) function,

sorted( ) function.max( ) function.

12. What is the maximum possible length of an identifier in Python?

Ans: An identifier can have a maximum length of 79 characters in Python.

13. What are the benefits of using Python?

Ans:

* 1. Extensive Libraries

Python downloads with an extensive library and contains code for various purposes like regular expressions, documentation-generation, unit-testing, web browsers, threading, databases, CGI, email, image manipulation, and more.

* 2. Extensible

Python can be extended to other languages. You can write some of your code in languages like C++ or C.

This comes in handy, especially in projects.

* 3. Embeddable

Complimentary to extensibility, Python is embeddable as well. You can put your Python code in your source code of a different language, like C++.

This lets us add scripting capabilities to our code in the other language.

* 4. Improved Productivity

The language’s simplicity and extensive libraries render programmers more productive than languages like Java and C++ do.

Also, the fact that you need to write less and get more things done.

* 5. IOT Opportunities

Since Python forms the basis of new platforms like Raspberry Pi, it finds the future bright for the Internet Of Things.

This is a way to connect the language with the real world.

* 6. Simple and Easy

When working with Java, you may have to create a class to print ‘Hello World’. But in Python, just a print statement will do.

It is also quite easy to learn, understand, and code.

* 7. Readable

Because it is not such a verbose language, reading Python is much like reading English. This is the reason why it is so easy to learn, understand, and code.

It also does not need curly braces to define blocks, and indentation is mandatory. This further aids the readability of the code.

* 8. Object-Oriented

This language supports both the procedural and object-oriented programming paradigms.

While functions help us with code reusability, classes and objects let us model the real world.

A class allows the encapsulation of data and functions into one.

* 9. Free and Open-Source

Python is freely available. But not only can you download Python for free, but you can also download its source code, make changes to it, and even distribute it.

It downloads with an extensive collection of libraries to help you with your tasks.

* 10. Portable

When you code your project in a language like C++, you may need to make some changes to it if you want to run it on another platform.

But it isn’t the same with Python. Here, you need to code only once, and you can run it anywhere.

This is called Write Once Run Anywhere (WORA). However, you need to be careful enough not to include any system-dependent features.

14. How is memory managed in Python?

Ans: Memory management in Python involves a private heap containing all Python objects and data structures. The management of this private heap is ensured internally by the Python memory manager. The Python memory manager has different components which deal with various dynamic storage management aspects, like sharing, segmentation, preallocation or caching.

15. How to install Python on Windows and set path variables?

Ans: Download the [latest version of Python](https://www.python.org/downloads/).

* Run the installer file and follow the steps to install Python

During the install process, check Add Python to environment variables. This will add Python to environment variables, and you can run Python from any part of the computer.

16. Is indentation required in python?

Ans: Yes, Indentation is a very important concept of Python because without properly indenting the Python code, you will end up seeing IndentationError and the code will not get compiled.