Q1.

Python Programming language was developed by **Guido van Rossum.**

It was released in 1991.

Q2.

Python is an interpreted programming language that supports **Object Oriented Programming, functional programming and structured programming.**

Q3.

**Yes**, Python is a case-sensitive programming language.

Q4.

The extension of a python file is :- **.py**

Q5.

Python is an **interpreted** programming language.

Q6.

# Initializing and printing the values in python

a,b = 2,3.5

print(a,b)

Q7.

**‘#’** is the character used to give single line comment.

Q8.

i) In terminal, type ‘python –version’

ii) import sys

print(sys.version)

Q9.

lambda

Q10.

Pip stands for **‘Preferred Installer Program’.**

It is a command-line utility that installs, uninstalls or reinstalls python packages with one single command.

Q11.

Built in functions in python are :-

i) **print()** - This function prints whatever is present inside the braces.

i.e. print(“hello world”)

ii) **input()** - This function is used to take user input.

i.e. name = input(‘Enter your name :’)

iii) **type()** - This function displays the type of the variable/value.

i.e. type(5)

iv) **id()** - This function gives the memory location/ address at which the data is stored.

i.e. a = 5

print(id(a))

v) **len()** - This function gives the length of the variable.

i.e. a = ‘abc’

print(len(a))

vi) **range()** - This function returns a sequence of numbers starting from 0 (default) upto the specific number.

i.e. for i in range(5):

Q12.

An identifier can have a maximum length of **79** characters in python.

Q13.

**i) Large Developer Community**

Python’s large open source community means we can enjoy strong peer support and helpful documentation.

**ii) Extensive libraries**

Python offers a wide range of libraries that can be used across various platforms.

Libraries are collections of resources that help us streamline application development.

**iii) Portability**

Portability refers to the ability of the program to run across various operating systems.

Python can run across Windows, MacOs and linux without modifying the code.

**iv) Wide range of use cases**

Python can be used in :-

Data Science, Machine Learning, Cybersecurity, Game Development, Web Development, Embedded applications, etc.

Q14

i) In python memory allocation and deallocation is automatic as python developers created a garbage collector.

ii) Garbage collection is the process in which the interpreter frees up the memory when not in use to make it available for other objects.

iii) There are two parts of memory:

1. Stack memory - The methods/method calls and references are stored here.
2. Heap memory - The value objects are stored here.

Q15

i) Open the browser and go to ‘<https://www.python.org>’ and download the windows installer.

ii) Double click on the downloaded file and install python for all users, and ensure that python is added to your path.

iii) Advance System Settings > Environment Variables > New tab on User Variable > Copy the path of python folder > Ok

Q16

Yes, indentation is required in python.