① Features of python:

- Easy to code
- Easy to read
- free and opensource
- Robust standard library
- Interpreted
- Portable
- Object-Oriented programing language.
- Dynamically Typed

② What is python:

- Python is an interpreted, object-oriented, high-level programming language with dynamic semantics.

③ What is dynamically typed language:

- The variable is checked at the runtime of the code then it is a dynamically typed language.
- Eg: Python, javascript, PHP ruby.

④ What is statically typed language:

- The variable is checked at the compile-time of the code than the language is called a dynamic typed language.

⑤ Interpretted language:

Python is a interpretted language, that means a source code is converted into bytecode then it is executed by the python virtual machine.

⑥ PEP-8 (Python enhancement protocol):

It is a document that provides guidelines and best practices on how to write python code.

⑦ Difference between list and tuple:

List	Tuple
• Lists are mutable	• Tuple are immutable.
• Lists are ordered.	• Tuple are ordered too.
• Elements of the list can access by index value +ve & -ve	• can be accessed by +ve & -ve index values.
• List use [ ]	• Tuple use ( ).
• Implimentation of iteration is time consuming.	• Implimentation of iteration is comparitively fast.
• list is better for performing operations like insertion & deletion.	• A tuple datatype is apropriate accessing the elements.
• List consumes more memory.	• Tuple consumes less comparitively.
• List have several built-in methods. eg (append(), copy(), clear(), extend(), min(), max()).	• Tuple does-not have many built in methods.

⑧ Difference between list and set:

List	Sets
• List is mutable	• Set is also mutable
• It is ordered collection of items.	• It is unordered collection of items.
• Items in lists can be replace or changed.	• Items in set cannot be changed or replace.

- List can have duplicate values.
- set cannot have duplicate values ③

⑨ List updation methods:

- using + operator
- insert()
- append()
- extend()

⑩ List deletion methods:

- Del (keyword)
- remove()
- pop()
- clear()

⑪ List comprehensions:

Loop in list is known as list comprihension

⑫ Built in Datatypes:

It is the datatypes that are predefined by the programming language itself.

⑬ Sequence datatypes:

- String
- list
- tuple

⑭ Loop control statements:

Break, Continue, pass

Break:

- It terminates the current loop.
- ie the loop in which it appears, and resumes execution at the next statement immediately after the end of that loop.

Continue:

- It forces to execute the next iteration of the loop.
- It skips the rest of the code inside the loop for the current iteration only.

Pass:

- It will not execute the ~~loop~~ iteration in a loop and skips.

(15) Modules in python:

- A python module is a file containing python definition and statements.
- A module can define functions, class, variable ~~variable~~

(16) Packages in python:

- A python package is a collection of module.
- Modules that are related to each other are put into the same packages.

(17) Use of self in python.

- self represents the instance of class.
- This keyword allows us to access variable, attributes and method of a defined class in python.

(18) Diff b/w in-it.py and in-it.

in-it.py	in-it method
• There are files are required to make python treat the directories as containing packages. • This is done to prevent directories with a common name	• --init-- is mainly constructor. • It is used to initialize the objects state.

(19) Slicing in python:
It will show the course of the given string.
∴ slicing operator.

(20) Difference b/w arrays & list:

List	array
• Can consist of elements belonging to different data types. • cannot directly handle arithmetic operations.	Only consist of elements belonging to the same data type. • Can directly handle arithmetic operations.

(21) Decorators in python:
It is a very powerful and useful tool in python since it allows programmers to modify the behaviour of a function or class.

(22) Dict and list comprehension:
Dict It is used to store data values in key values pairs.
It can be written as a series of key:value pairs with {}

(23) Python Path:

It is a special environment variable that provides guidance to the python interpreter about where to find various libraries and application.

(24) Iterators in python:

It is an object that allows you to iterate over collections of data, such as list, tuple and dictionaries and sets.

or

It is an object that contains a countable number of values.

(26) How to delete a file in python:

```
os.remove("filename").
```

(27) Split and join functions:

Split function:

The split() splits a string into lists.

Syntax, string.split(separator, maxsplit).

join function:

The join() method takes all items in an iterable and joins them into one string.

A string must be specified as the seperator.

Syntax,

string.join(iterable).

(28) Types of arguments in python:

- Default argument
- Keyword argument
- Required argument
- Variable-length argument.

(29) ARGS and KWARGS.

ARGS (*args):

It allow us to pass a variable number of non-keyword arguments to python functions.

KWARGS (**kwargs):

The special syntax **kwargs in functions in python is used to pass a keyword, variable-length argument dict.

Eg with both functions:

```
def myfun (arg1, arg2, arg3):
    print ("arg1:", arg1)
    print ("arg2:", arg2)
    print ("arg3:", arg3)
args = ("Geeks", "for", "Geeks")
myfun (*args).
```

(30) Negative Index:

It is used to begin slicing from the end of the string ie. the last.

(31) oops programming language:

It is a programming paradigm that uses objects and classes in programming.

(32) Types of inheritence:

- Single
- Multiple
- Multilevel
- Heirarichel

(33) Access specifiers:

- Private
- Public
- Protected

(34) How to create empty class in python:

```
class student:
    pass.
```