

Q1. Python is an interpreted language. Explain.

A1. Interpreted language is any programming language that executes its statements line by line. Programs written in Python run directly from the source code, with no intermediary compilation step.

Q2. What is pep 8?

A2. PEP in Python stands for Python Enhancement Proposal. It is a set of rules that specify how to write and design Python code for maximum readability.

Q3. How is Memory managed in Python?

A3. Memory in Python is managed by Python private heap space. All Python objects and data structures are located in a private heap. This private heap is taken care of by Python Interpreter itself, and a programmer doesn't have access to this private heap.

Q4. What are Python Modules?

A4. Files containing Python codes are referred to as Python Modules. This code can either be classes, functions, or variables and saves the programmer time by providing the predefined functionalities when needed

Q5. What are python namespaces?

A5. A Python namespace ensures that object names in a program are unique and can be used without any conflict. Python implements these namespaces as dictionaries with 'name as key' mapped to its respective 'object as value'.

Q6. What are functions in Python?

A6. A function is a block of code that is executed only when a call is made to the function. def keyword is used to define a particular function.

Q7. What are the common built-in data types in Python?

A7. Number, string, tuple, list, set

Q8. What is scope resolution?

A8. A scope is a block of code where an object in Python remains relevant. Each and every object of python functions within its respective scope. As Namespaces uniquely identify all the objects inside a program but these namespaces also have a scope defined for them where you could use their objects without any prefixes. It defines the accessibility and the lifetime of a variable

Q9. How to install Python on Windows and set a path variable?

A9. Install Python normally and click the option to add to path on the installation window.

Q10. Is python case sensitive?

A10. Yes Python is case sensitive.

Q11. . What are Python packages?

A11. A Python package refers to the collection of different sub-packages and modules based on the similarities of the function.

Q12. Is indentation required in Python?

A12. Yes indentation is required in Python.

Q13. How can you randomize the items of a list in place in Python?

A13. By using the shuffle or randint function.

Q14. What do you mean by Python literals?

A14. Literals refer to the data which will be provided to a given in a variable or constant.

Q15. What is a map function in Python?

A15. The map() function in Python has two parameters, function and iterable. The map() function takes a function as an argument and then applies that function to all the elements of an iterable, passed to it as another argument. It returns an object list of results.

Q16. What are python iterators?

A16. These are the certain objects that are easily traversed and iterated when needed.

Q17. Do we need to declare variables with data types in Python?

A17. No. Python is a dynamically typed language, I.E., Python Interpreter automatically identifies the data type of a variable based on the type of value assigned to the variable.

Q18. How do you write comments in python?

A18. By using #

Q19. What is the difference between range & xrange?

A19. Functions in Python, range() and xrange() are used to iterate in a for loop for a fixed number of times. Functionality-wise, both these functions are the same. The difference comes when talking about Python version support for these functions and their return values.

Q20. Differentiate between NumPy and SciPy?

A20. Numpy is used for math computations, scipy is used for integration and differentiation

Q21. What does len() do?

A21. `len()` is an inbuilt function used to calculate the length of sequences like list, python string, and array.

Q22. How to add values to a python array?

A22. In python, adding elements in an array can be easily done with the help of `extend()`, `append()` and `insert()` functions.

Q23. How will you convert a string to all lowercase?

A23. Use the `lower()` function

Q24. What is pandas?

A24. Pandas is an open source python library which supports data structures for data based operations associated with data analyzing and data Manipulation

Q25. What is regression?

A25. Regression is termed as supervised machine learning algorithm technique which is used to find the correlation between variables and help to predict the dependent variable(y) based upon the independent variable (x).

Q26. What is the easiest way to calculate percentiles when using Python?

A26. The easiest and the most efficient way you can calculate percentiles in Python is to make use of NumPy arrays and its functions.

Q27. Can you create a series from the dictionary object in pandas?

A27. One dimensional array capable of storing different data types is called a series.

Q28. How will you identify and deal with missing values in a dataframe

A28. We can identify if a dataframe has missing values by using the `isnull()` and `isna()` methods.

Q29. How will you delete indices, rows and columns from a dataframe?

A29. You can use `del df.index.nam`

Q30. How will you efficiently load data from a text file?

A30. You can use `numpy.loadtxt()`