1) What are the data types in python? Explain

Ans) Python has the following built-in data types -

i) Numbers : Number data types store numeric values. Number objects are created when you assign a value to them.

ii) Strings : Strings are identified as a contigious set of characters represented in quotation marks. Python allows either pair of single or double quotes.

iii) Lists : These are most versatile of Python's compound data types. A list contains items seperated by comma and enclosed within square brackets ([]).

iv) Tuples : It is another sequence data type that is similar to list. It consists of number of values seperated by commas. Unlike lists, tuples are enclosed within parenthesis

v) Dictionary : Python's dictionaries are kind of hash-table type. They work like associative arrays or hashes found in Perl and consist of key-value pairs. They are enclosed within curly braces

2) Briefly explain history of Python.

Ans) Python was conceived in late 1980s by Guido van Rossum at Centrum Wiskunde & Informatica (CWI) as a successor to ABC language, capable of exception handling and interfacing with

Amoeba operating system. Python is named after a TV show called 'Monty Python's Flying Circus' and not after python, the snake.

3) Explain all Operators in python.

Ans) Operators are special symbols that carry out arithmatic or logical computation.

i) Arithmetic operators - These are used to perform mathematical operations like addition, subtraction.

ii) Relational operators - Comparision operators are used to compare values. It returns either true or false according to condition.

Ex - >, <, =, !=, >=, <=

iii) Logical operators : They are the and, or, not operators

iv) Bitwise operators : They act on operands as if they were strings of binary digits. They operate bit by bit, hence the name.

Ex - &, |, ~, ^, >>, <<

v) Assignment operators : They are used in Python to assign values to variables.

Ex - =, +=, -=, *=, /=, %=, //=, &=, ^=, >>=, <<=

vi) Special operators : Python offers special types of operators like identity or membership operator.

a) Identity : is and is not are identity operators
They are used to chek if two values are locates on same part of memory.
Ex - is, is not

b) Membership : They are used to test whether a value or variable is found in a sequence.
Ex - in, not in

4) Explain the features of python.
Ans) There are many features in python, some are.

1) Easy to code - Python is high level language
It is very easy to code in python compared to language like C, C#, java script, etc.

2) Free and Open source - Python language is freely available at official website.

3) Object oriented language - Python supports object oriented language and concepts of classes, objects encapsulation, etc.

4) High level language - when we write programs we do not need to remember system architecture

5) Extensible feature - We can write python code into C or C++ language

6) Python is portable language - It can be run on any platform.

7) Large Standard library - It provides rich set of module and functions.

5) Justify why python is interactive interpreted language.

Ans) Unlike c/c++ etc, Python is an interpreted object oriented programming language. The compiler translates the whole code in one-go rather than line by line. This is particularly advantageous in debugging process.