Assignment-2

1) What the data types in python? Explain?

There are 5 data types in python

1) numbers
2) Strings
3) list
4) tuples
5) dictionary

i) Numbers:-

integers, floating point numbers & Complex numbers will come under this datatype.

Eg:- ① a = 5

print (a, type (a))

O/p:- 5 <class 'int'>

② a = 5.6

print (a, type (a))

O/p:- 5.6 <class 'float'>

③ b = 1+5j

print (b, type (b))

O/p:- 1+5j <class 'complex'>

ii) String:-

String is a data type. We can use single quotes (or) double quotes to represent strings.

Eg: ① a = 'hi'
print(a)

O/p:- hi

② print("hi gitam")

O/p:- hi gitam

iii) List :-

In list they are seperated by commas & are enclosed by within brackets.

iv) Tuples:-

* Tuples are used to write-protect data & are usually faster than lists as they cannot change dynamically.
* It is defined within parentheses '()' where items are separated by commas

v) Dictionary:-

These are defined within braces '{}' & they are seperated by comma

8) Briefly explain the history of python?

In

Python is a widely used general-purpose, high level programming language.

> working on python started at 1980's. Soon after Guido Van Rossum began doing its application based work in Dec of 1989 by at Centrum Wiskunde & Informatica (CWI) which is situated in Netherland. & in 1991 he developed the python Software foundation.

3) Explain all the Operators in python?

i) Arithematic Operator

		Example
+	→ Addition	x+y
-	→ Subtraction	x-y
*	→ Multiplication	x*y
/	→ division	x/y
%	→ Modulus	x%y
//	→ Floor division	x//y
**	→ Exponent	x**y

ii) Comparision Operator

>	→ greater than	x>y
>=	→ greater than or equal to	x>=y
<	→ less than	x<y
<=	→ less than or equal to	x<=y
==	→ equal to	x==y
!=	→ not equal to	x!=y

iii) Logical operator

operator	Meaning	Eg
and	True if both the operands are true	x and y
or	True if either of the operand is true	x or y
not	True if operand is false (Complements the operand	not x

iv) Bitwise Operator

operator	Meaning	Eg
&	Bitwise AND	x & y
|	Bitwise OR	x | y
~	Bitwise NOT	~x
^	Bitwise XOR	x ^ y
>>	Right shift	x >> 2
<<	left shift y	y << 2

V) Assignment operator:-

= ; += ; -= ; *= ; /= ; %= ; **= ; //= ;

&= ; |= ; ^= ; >>= ;

Vi) Identity Operator

is	True if the operands are identical	Eg: x is True

is not - True if the operands are not equal (or) identical

vii) Membership operator:

in - True if value/variable is found in the sequence

not in - True if value/variable is not found in the sequence.

4) Explain the features of python.

> Simple
> Easy to learn
> Free & Open Source
> High level language
> portable
> Object Oriented
> Extensible
> Scalable
> Interpreted

5) Justify why python is interactive interpreted language?

- python is interactive interpreted language. when a python stmt is entered, & is followed by the return key. if appropriate, the result will be printed on the screen immediately on the next line.
- This is the particularly advantageous in the debugging process. In interactive mode of operation.