1. In the below elements which of them are values or an expression? eg:- values can be integer or string and expressions will be mathematical operators.

\*

'hello'

-87.8

-

/

6

**ANS:**

* **\* is an expression**
* **‘hello’ is a value**
* **-87.8 is a value**
* **- is an expression**
* **/ is an expression**
* **. is an expression**
* **6 is a value**

2. What is the difference between string and variable?

String is a text string example ‘Navin’ is a string, whereas variable is something that stores data. It may store string, int, float etc

String is one of the data type that can be stored in a variable.

3. Describe three different data types.

List: List data type can hold heterogeneous data. Ex: a=[1 , ‘navin’ , 34.5, 6+7j].

Lists are mutable.

We can declare list using the square brackets or using the keyword list().

We can access the list elements using the list index and can perform operations on lists.

Set: Set is an unordered collection of elements can hold heterogeneous data. Ex: a={1, ‘navin’ , 34.5 , 6+7j}

We can declare set using the flower brackets or using the keyword set()

We cannot access set using the index and set elements are immutable. No duplicate values

Dictionary: Dictionary is a ordered collection of data, we can declare set using {}

It hold the value in key value format. Ex: dict={a:’1’, b:’navin’}

We can access the values using the key.

Dictionary is mutable.

4. What is an expression made up of? What do all expressions do?

An expression is a combination of values, operators, variables. We can evaluate expression to display the result. The python interpreter evaluate the expression to give the desired result.

Ex: a=10 \*109

5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

Statement is a instruction that python interpreter can execute whereas it evaluate the expression to provide the result

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

Ans: 23

7. What should the values of the following two terms be?

'spam' + 'spamspam' = spamspamspam

'spam' \* 3 = spamspamspam

8. Why is eggs a valid variable name while 100 is invalid?

Ans: Variable name should be start with (a-zA-Z) as we cannot start the variable name with integer. It will give us error if the name start with integer.

9. What three functions can be used to get the integer, floating-point number, or string version of a value?

ANS: int(), float(),string()

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

Ans: We cannot concatenate the string with the integer data.

To get the desired result all 3 of them should be declared as string 'I have eaten ' + ‘99’+ ' burritos.'