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

**Answer: Values : ‘hello’,-87.8,6**

**Expression : \* , - , / , .**

2. What is the difference between string and variable?

**Answer : String : String basically refer to any text, in python we use “ ”(double quotes),’ ’(single quotes) to define a string.**

**Variable : Variable can refer to any value. It may be integer, float, string , etc**

3. Describe three different data types.

**Answer :**

**String : is a sequence of characters. We can initialize a string as a=’xyz’ or b=’nlp’**

**List : that is a mutable, or changeable, ordered sequence of elements. We define list as lst=[1,2,’abc’]**

**Int : integer, can hold the integer value. For e.g : t=10 or x=int(10)**

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

**Answer :**

**Expression : An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. Expression are composed of operator and operand.**

**e.g : 1+1, len(t)🡪 these all are expression.**

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

**Answer : Statements basically performs any operation, whereas expression represents values.**

**For E.g : spam =20 //this is an statement which is assigning 20 to a variable spam.**

**“xyz”, 10,20 these all are expressions.**

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

bacon = 22

bacon + 1

**Answer : bacon will contain 22 as a value.**

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

'spam' + 'spamspam'

'spam' \* 3

**Answer : 'spam' + 'spamspam' --🡪 spamspamspam and also 'spam' \* 3 will print the same output, string which we will be provide will be propagated 3 times : spamspamspam**

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

**Answer : In python variable name should start from any character or \_(underscore), hence eggs is valid whereas 100 is not.**

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

**Answer :**

**For e.g,**

**S=10**

**int(S) will give integer version, float(S) will give floating version and , string(S) will give us the string version.**

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

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

**Answer : This expression will cause an error because we are trying to concatenate the string with integer, concatenation of string with integer is not supported in python. To make it working we just need to convert the integer to string.**

**'I have eaten ' + str(99) + ' burritos.'**