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.

\* 🡪 Expression

'hello' 🡪 String

-87.8 🡪 String

- 🡪 Expressions

/ 🡪 Expression

* 🡪 Expression

6 🡪 String

2. What is the difference between string and variable?

Ans :

String

1. String is a sequence of characters which can consist any value inside it.
2. String values can be stored in double quotes or single quotes: example = “iNeuron”,’iNeuron’.
3. String are iterables which means we can access string values using for-loop or by indexes.

Variable

1. Variable are an identifier to store a value, we can see it as a vault or container inside which we are storing the information.
2. There are certain rules to create a variable or standards :
   1. A variable name cannot start with a number it should always start with a underscore or alphabets
   2. A variable name can only consist of alpha-numeric and underscore (A-Z,a-z,0-9,and \_)
   3. Variable are case-sensitive Name != NAME

**Example**

String1 = “iNeuron”

String2 = “OneNeuron”

In above example String1 and String2 are variable and the value they are storing is a String.

1. Describe three different data types.

Ans : Str, int, float, complex

String1 = “iNeuron”

Int1 = 50

Float1 = 56.78

Complex1 = 67+5j

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

Ans : Expression are combinations of operators and operands.

Expressions produce a value.

Example : exp= 1.5 + 1.5

print(exp) 🡪 O/P = 3 (new value Is produced)

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

Ans : statements does not create a new value or do not yield a new value whereas expressions produce some other value

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

bacon = 22

bacon + 1

bacon will contain value 22 only. As we are not updating the value of bacon.

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 : eggs is a valid variable and 100 is not because as per python fundamentals variable name can only be start with a underscore or alphabets not with number. A variable name can only consist of alpha-numeric and underscore (A-Z,a-z,0-9,and \_)

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

Int(), float(), str() will convert to the respective version of the values passed to them.

String : count, split, strip

Float : is\_integer, hex, as\_integer\_ratio

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

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

Ans : An error will come can only concatenate str not int

Fix  
'I have eaten ' + ‘99’ + ' burritos.' 🡪 now it will work properly.