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**: The following are the values: ‘hello’, -87.8, 6

The following are the expression: \*, -, /, +

2. What is the difference between string and variable?

**Answer**: Strings are the values that represents a text and variable can refer to any values.

E.g. a=”Hello” (string)

b=3 or b=”Hi” (here b is variable)

3. Describe three different data types.

**Answer:** Int: It stores the integer values (Positive or negative) and cannot store decimal values.

E.g. a=1, b=2

Float: It stores the decimal values. It can store integer as well as decimal values.

E.g. c=2.5, d=3.8

Strings: It stores the sequence of characters and must be enclosed in single, double or triple quotes. It can be any digit, text, symbols or white spaces. And also strings are immutable data type which means once a value is assigned it cannot be changed later.

E.g. a=”Hello”, b=”Ineuron”

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

**Answer:** Expressions are made up ofvariables, numbers and at least one arithmetic operations. Expressions performs the computation between the elements of the expression and return a value which is the result of that computation.

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

**Answer:** Expressions evaluate to a value by doing computation and expression can be made of several expressions. While statement performs action and statement cannot be made up of another statement.

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

bacon = 22

bacon + 1

**Answer:** The variable bacon contains the value of 23

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

'spam' + 'spamspam'

'spam' \* 3

**Answer:** For both of the expression we will get the same result as **“spamspamspam”**

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

**Answer:** As per variable naming rules a variable cannot start with a number or numeric value and also cannot use special characters other than underscore. Hence eggs is a valid variable name while 100 is invalid variable name.

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

**Answer:** The three functions are:

For integer we can use int() to get integer values, for floating-point numbers we use float() to get floating point numbers and for string we can use str().

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

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

**Answer:** This expression caused an error due to we are adding integer with string which is mathematically not possible hence we can convert integer 99 to string and then we are able to concatenate the strings.