**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.**

\* 🡪 mathematical operator

'hello' 🡪 values

-87.8 🡪 values

- 🡪 mathematical operator

/ 🡪 mathematical operator

* 🡪 mathematical operator

6 🡪values

**2. What is the difference between string and variable?**

Ans 2: String is a set of characters used to identify a certain text. It is usually enclosed in double or single quotes and can contain A-Za-z, numbers(0-9), spaces, special characters. String is a data type. For eg – “My name is Ritu.”

But variable is nothing but a placeholder or a container for storing different types of values which are assigned to it.

For eg S = “My name is Ritu.” (string Datatype)

Here in this example S is a variables which is storing some value and the value type is a string – “My name is Ritu.”

S1= 10 (integer Datatype)

S2= True(Boolean Datatype)

S4= 100.0(Float Data type)

**3. Describe three different data types.**

**String Data type**: String is a set of characters used to identify a certain text. It is usually enclosed in double or single quotes and can contain A-Za-z, numbers(0-9), spaces, special characters. . For eg “My name is Ritu.”

**Boolean Data type**: Boolean only consists of two values True(1) or False (0).

For example, S = True

**Integer Data type:** Integer consists of positive, negative and zero numbers without any decimal part.

For example, S= 100

**Float Data type:** Integer consists of positive, negative numbers with the decimal part.

For example, S = -50.0

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

Solution= Expression is combination of operators and operands. Expression provide us some final value of the inputs provided after doing the operations between the operands(inputs values).

Example, 10 + ‘Rain’ this expression gives🡺 ‘10Rain’

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

Solution: spam = 10 , here only 10 is the expression but when it is assigned to the variable spam, it becomes a statement

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

bacon = 22

bacon + 1

Solution: bacon still contains 22 as bacon + 1 value is not yet assigned to the variable 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?**

Sols = a variable name can start with a character or underscore but not a number.

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

solution : int(), float(), str()

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

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

Sol : Integer cannot be concatenated with strings.

To fix –

a. Convert integer to string : 'I have eaten ' + str(99 )+ ' burritos.'

b. Add quotes around 99 to change into string : : 'I have eaten ' + ‘99’+ ' burritos.'