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' - Value

-87.8 - Value

- - Expression

/ - Expression

* - Expression

6 - Value

2. What is the difference between string and variable?

Ans: Variable is identifier which is used to store any kind of values. Values of variable can be changed.

String is a kind of variable where we store values in single or double quotes i.e. “ ”. String is one of several types of a variable or a datatype.

3. Describe three different data types.

Ans: 1. Numeric Datatype: It includes integer, float, complex number.

2. Sequence Type: It includes String, Tuple, lists

3. Dictionary: it has key and value pairs.

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

Ans: An expression is a combination of values, variables, operators, and calls to functions.

Expressions are used to produce other values with the help of given operands and operators.

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

Ans: Expressions need to be evaluated, it should return a value. Spam = 10 is an assignment statement which do not return a value. It simply executes and assign value 10 to the variable Spam. Statement doesn’t necessary to return a value.

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?

eggs is a valid variable because it can store any type of values in it. For any memory location we can give that location name as ‘eggs’. On the other hand, 100 is itself a constant value and cann’t store any other value in it. We can’t give any memory location name as 100.

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

Ans: For integer: **int(a)**: it will convert value of a into integer type.

For Float: **float(a**): it will convert value of a into floating point type.

For String: **str(a)**: it will convert value of a into string type.

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

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

Ans: In this above expression, 99 is given as integer values so compiler can’t able to add string value with an integer value. If we put 99 in single quote i.e. ‘99’ the expression will not show any error.

Correct expression : 'I have eaten ' + ‘99’ + ' burritos.'