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.

\* is an expression

'hello' is an expression

-87.8 is a Value

- is an expression

/ is an expression

* is an expression

6 is a value

2. What is the difference between string and variable?

A **variable** is a space in memory where the data used by a program will be stored and retrieved while a **string** is a variable that stores text. So basically a string is a ***variable type***

3. Describe three different data types.

a. Numeric Data: Data that allows arithmetic operations to be performed on it e.g. integers, float, complexes

b. Boolean Data: Type of data is used to perform logical operations e.g. True, False

c. List Data: This data type allows for grouping of several items. It can be a combination of various data types e.g. List1= ‘1, “my name”, True’ ; or it can be a group of the same data type e.g. List2 =’1, 2, 8,9’

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

a. An expression contains identifiers, literals and operators

b. Expressions represent a value

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

In Python, **expressions** are representation of value, while **statements** are instructions that the Python interpreter can execute. When a statement is typed, Python interpreter will execute and display a result

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

bacon = 22

bacon + 1

The variable bacon contains the integer 22

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

'spam' + 'spamspam' will give ‘spamspamspam’

'spam' \* 3 will give ‘spamspamspam’

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

eggs is a valid variable name and 100 is not because there are rules to naming variables in python and as such, a variable name must start with a letter or the underscore character and a variable cannot start with a number

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

Int(); float(); str() in the order asked

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

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

The expression causes an error because it is a combination of different data types I.e. strings and integers. To fix it, the integer 99 should be converted to a string using the function str().

‘I have eaten’ +str(99) + ‘burritos.’