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?

Solution:

String = String is a sequence of characters

Variable = variable is a local instance or global instance where data is stored

3. Describe three different data types.

Solution:

Numeric data type – can be integers (6), float (6.32) or complex numbers (3+4j)

String – sequence of characters. Ex: “Science”

Boolean – True or False

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

Solution: Expressions are made of values, variables, operators and call to function. They evaluate to something.

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

Solution:

Expressions evaluate to something. Ex: n +5

Statements are either assigning or updating variables or any python line that contains a keyword like print() etc.

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

bacon = 22

bacon + 1

Solution: Bacon contains 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?

Solution:

First character of a variable name cannot be a digit hence 100 is an invalid variable name

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

Solution:

Int(), float() and str()

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

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

Solution:

Error is because we are trying to concatenate string and integer. If we change 99 to string by using quotes (‘99’) or using str(99), it will work.