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?

String: It is basically sequence of characters enclosed in single or double quotes.

Variable: It is some character to which a value is assigned which can be later used in the program.

3. Describe three different data types.

a) Integers: It represents the whole numbers on a number line.

b) Complex: It represents the complex number in the form of a+jb.

c) Boolean: It represents either True or False value.

d) String: It represents set of characters.

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

An expression is made up of variables and mathematical operators. They help in calculating the value of expression.

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

Expression: They are combination of variable and operators which result in some value.

Statements: They are commands and actions.

An expression is also a statement which evaluates some value.

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

bacon = 22

bacon + 1

In this case bacon will contain 22 only.

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 valid variable name as it is a sequence of characters while 100 is not. Also, a variable should start with a letter.

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

x = input ("Enter a value")

a = int(x)

b = float(x)

c = str(x)

print('Integer value', a)

print('Float value', b)

print('String value', c)

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

'I have eaten ' + 99 + ' burritos.' : The data types are not same.

Correct expression:

'I have eaten ' + str(99) + ' burritos.'