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?

A variable is a container of information but a string is a type of information which can be stored in a variable.

For example , x = ‘Ineuron.’

Here x is a variable and ‘Ineuron.’ is a string which is stored in variable x .

3. Describe three different data types.

There are different types of data built in Python by default.

Categorically they are

A. Text type = str , which can store text type data , ex, x= ‘ineuron.’

B. Numeric type = A. int , integer type data , ex, x= 5

1. Float , can store decimal values , ex, x = 25.98
2. Complex , can store imaginary numbers ,ex , x = 2 + 3j

C. Boolean type = Data type with one of the two built-in values, either True or False.

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

Python expressions are made of identifiers , literals and operators.

Identifiers - Any name that is used to define a class, function, variable module, or object is an identifier.

Literals - These are language-independent terms in Python and should exist independently in any programming language

****Operators****: In Python you can implement the following operations using the corresponding tokens. + - \* / % \*\* etc

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

Expressions are representations of value. They are different from statement in the fact that statements do something while expressions are representation of value. For example any string is also an expressions since it represents the value of the string as well.

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

bacon = 22

bacon + 1

After running the code the variable bacon contains the integer value 23.

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

'spam' + 'spamspam' = ‘spamspamspam

'spam' \* 3 = ‘spamspamspam

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

As per the naming convention of variables in python the variable names cant start with numeric values.Following are some rules for naming convention in python

1. Variable name must start with a letter or underscore character.
2. Variable name cant start with numeric character.
3. variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_ )
4. Variable names are case-sensitive

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

To get the integer version of a value - int ()

To get the floating point version of a value - float ()

To get the string version of a value - str ()

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

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

This expression has an error because it tries to concatenate 2 strings with an integer,which throws an error as

TypeError: can only concatenate str (not "int") to str

To fix it we have to use up-casting which makes 99 a string.

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