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.

\* - Operator (Multiply)

'hello' – Value(string)

-87.8 – Value(float)

- Operator (subtract)

/ - Operator (division)

* - Operator (adddition)

6 – Value(integer)

2. What is the difference between string and variable?

A string is type of data that can be stored in a variable whereas Variable is reserved memory location to store different types of data (eg : String data, integer data, Boolean data).

String can be defined as words enclosed in double/single quotations. (Eg: “Welcome to Ineuron).

A Variable can be assigned to values using =. (Eg: a=25, b=”kalyan”, c= True)

3. Describe three different data types.

Three Data Types –

Integers (Whole numbers. Can be assigned to variables with “=”. Eg: a=35)

Floating point numbers ( eg : b = 1.85)

String data. It should be described within ‘ ‘ or “ “. (Eg: c = “assignement”)

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

Expressions are made of values (Integer, Float , Boolean data types) and operators (/, \* , + , -) and the results in to single value (Integer, Float , Boolean data types)

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

Expression is combination of values and operators. It will evaluate single value.

Statement represents action or command( Eg ; import , assignment statements ( a= 10+12) )

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

bacon = 22

bacon + 1 = 23 (result)

The bacon variable contains 22 (As we assigned 22 to bacon variable with ‘=’. The value of bacon changes only if new value is assigned to it with “=”.)

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?

Variable name can start with alphabets or underscore (Eg ; salary or \_name). It cannot start with numbers. Therefore the variable name egg is valid whereas 100 is invalid

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

Int() , float () and str() are the three functions that will upcast the values to integer, floating point numbers and string version respectively.

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

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

Above expression consist of 2 data types.

1. String Data Type (‘I have eaten’, ‘burritos’)
2. Integer (99)

Python do not support heterogenous data types expressions. It throws

“can only concatenate str (not "int") to str” error message.

It can be fixed as follows:

‘I have eaten’ + ‘99’ + ‘burritos’ or ‘I have eaten’ + str(99) + ‘burritos’