**INEURON ASSIGNMENTS**

**Python Basics : Assignment 1**

## **Question 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.

\*

'hello'

-87.8

-

/

6

**Answer**:

* Values: ‘hello’, -87.8, 6
* Expressions: \*, -, /, +

## **Question 2:** What is the difference between string and variable

**Answer**:

* Variable is a container to store data of any datatype. Variable can be named with alphanumeric characters. It can be start with underscore (\_) or any alphabets, but it cannot be started with numeric characters like 1a = 10.
* String is a datatype represented within single quotes or double quotes or triple quotes while storing them in variable.
  + Eg., ‘hello’, “hello”, ‘’’hello’’’, “”“hello”””

## **Question 3:** Describe three different data types

**Answer**:

* Most common used datatypes are int, float and str
  + **Int** – Numbers without decimal is integer datatype. It can be 32 and 64 bit. The range of integer is -2147483648 through 2147483647
  + **Float** – Numbers having decimal is float datatype. It is 64 bit double precision. The max values is 1.8 x 10308
  + **String**: Any sequence of characters represented within quotes is String. The string is enclosed between single quotes or double quotes or triple quotes.
* Arithmetic operations can be done with integer and float data, but not with String.

## **Question 4:** What is an expression made up of? What do all expressions do

**Answer**:

* Expression is made up of variables, values, operators and calls to functions. Eg.,
  + x = x + 1,
  + a = ‘hello’ + ‘world’
  + return x
* Python interpreter evaluates the expressions and displays the result

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

**Answer**:

* Expressions contains identifiers, literals, operators and function calls which reduced to some results and displayed.
* Statements are a single line or several lines of python code. Eg., a = 10. No operations taken place here.

## **Question 6:** After running the following code, what does the variable bacon contain

bacon = 22

bacon + 1

**Answer**:

It will returns the result 23

## **Question 7:** What should the values of the following two terms be

'spam' + 'spamspam'

'spam' \* 3

**Answer**:

1. Result of 'spam' + 'spamspam' --> 'spamspamspam'

2. Result of ‘spam’ \* 3 --> 'spamspamspam'

## **Question 8:** Why is eggs a valid variable name while 100 is invalid?

**Answer**:

* As per the rules for naming a variable, variable name should start with (\_) or any upper case or lower case alphabets and followed by any alphanumeric characters are allowed. Eg. Age1, \_age1 are valid.
* Hence, eggs is valid variable name and 100 is not.

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

**Answer**:

* int() function to get integer
* float() function to get float
* str() function to get string

**Question 10:** Why does this expression cause an error? How can you fix it?

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

**Answer**:

* We cannot concatenate String and Numbers datatypes using (+) symbol.
* Fix: converting 99 as string will solve the issue.
  + 'I have eaten ' + ‘99’ + ' burritos.’