**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 (Multiplication)

**'hello'** : Value (String)

**-87.8** : Value (Float)

**-** : Expression (Subtraction)

**/** : Expression (Division)

**+** : Expression (Addition)

**6** : Value (Integer)

**2. What is the difference between string and variable?**

In Python String is one of the data type and is enclosed with “ or ‘

Eg : ‘Hello’ or “Hello”

It can be used to perform many operations like string concatenation slicing etc.

Variable is a used to store data or values that are assigned to it.

Eg : a = 10 , Here a is a variable and 10 is the value assigned to it

**3. Describe three different data types.**

Int : it is a numeric data type which holds integer values

Eg : a = 10

Type(a)

Result : int

Str : it is a sequence of words enclosed in quotes “ or ‘

Eg : a = “iNeuron”

Type(a)

Result : str

Bool : it is Boolean data type which consist of True or False

Eg : a = True

Type(a)

Result : bool

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

Expression is a combination of mathematical operators and operators or variables.

Eg : y = mx+c

Here y is a output variable, m is a slope or mathematical calculation in simple, + is an operator which performs addition.

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

Expression : it is a combination of mathematical operators and operators or variables.

Eg : y = mx+c

Statement : It is an instruction or order given to perform certain action.

Eg : Spam = 10 ( assignment statement – assigns 10 to the variable called spam )

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

**bacon = 22**

**bacon + 1**

bacon contains 22

**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 a valid variable name because it satisfies the conditions of a variable, where as 100 is not a valid variable because variable should not start with a number.

Eg : eggs = 10 (Valid syntax)

10eggs = 10 (Invalid syntax)

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

int() to convert a value in to an integer

Eg : int(8)

Results : 8

float() to convert a value in to a floating value number

Eg : float(8)

Results : 8.0

str() to convert a value in to a string

Eg : str(8)

Results : ‘8’

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

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

It will show string concatenation error, only strings can be concatenated with each other not int.

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

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

Results : 'I have eaten 99 burritos.'