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.

\* -- ***mathematical operators***

'hello' = ***values***

-87.8 =***values***

- = ***mathematical operators***

/ = ***mathematical operators***

* = ***mathematical operators***

6 =***Value***

2. What is the difference between string and variable?

***Variables are used to store data in a program,generally variables used to assign certain data***

***Example:a=2,here a is variable***

***Strings are one of the datatype,strings are used to fill up the variable***

***Usually we denotes string in single or double quotes depends on requirement***

***Example: ‘I enrolled a course in ineuron’***

3. Describe three different data types.

Numeric: ***Usually numeric value,it can be int,float,complex,rational or irrational any numeric values comes under this***

Strings : [***Strings***](https://www.geeksforgeeks.org/python-strings/)***are arrays of bytes representing Unicode characters. A string is a collection of one or more characters put in a single quote, double-quote or triple quote. In python there is no character data type, a character is a string of length one. It is represented by***str ***class.***

Boolean: ***Data type with one of the two built-in values, True or False. Boolean objects that are equal to True are truthy (true), and those equal to False are falsy (false). But non-Boolean objects can be evaluated in Boolean context as well and determined to be true or false. It is denoted by the class bool.***

There are other datatypes also in python

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

***An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result.usually a mathematical expression like circumference of circle***

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

***Expression is a combination of variables, operations and values that yields a result value.***

***Ex:5\*5***

***Statements represent an action or command e.g.,*print statements, assignment statements.**

**Ex:print(‘hello world’)**

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

**bacon = 22**

**bacon + 1**

**variable bacon contains 22 only because if we want to change a variable we have to assign changes to that variable again i.e**

**if bacon =22 and again bacon = bacon+1**

**it will return 23**

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

'spam' + 'spamspam'

'spam' \* 3

**Both expressions evaluate to the string 'spamspamspam'**

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

**Variables cannot be assigned to number because number itself a value and we cannot assign a another value to a value**

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

**Int()**

**Float()**

**Str()**

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

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

Because 99 is an integer,if you want to concat they should be same datatype so to find this cast 99 as str then we can fix

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