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?

String is a data type and Variable are the object/entity that can hold value of different data type.

3. Describe three different data types.

**List:** It is an array[] that can hold any type of values (int,list,float,string etc) and are mutable. It is an ordered collection.

**Tuple:** It is an array with curly brackets () but the values are immutable once it is created, it is an ordered collection.

**Set:** It is an array with curly brackets {} but the values are mutable, and they are un ordered and it has only unique values

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

Expression are made up of an arithmetic symbols between two values or variables and perform an operation between those two entity.

ex : a + b where a and b can be a variable which can be assigned a value and the result would be addition of it

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

The assignment statement does not produce any result, it just assigns a value to a variable where expression perform different operations like addition, subtraction etc and produce an output

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

bacon = 22

bacon + 1

the bacon would be 23

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

'spam' + 'spamspam'

'spam' \* 3

The value of both the terms would be same that is : spamspamspam

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

Ideally the 100 represent a integer data type that is always on right side of equal to (=) . However eggs is a valid variable as it does not represent a valid data type . for eggs to be a valid data type it should be enclosed in quotes. Therefore eggs is valid variable

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

For integer : int () , for floating : float() , for string : str()

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

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

The reason is because of incorrect syntax , the addition is only applicable between the strings , over here we have an integer . Therefore we have to enclose this 99 or change the syntax like :

'I have eaten ' ,99 , ' burritos.' Or f"I have eaten {99} burritos."