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**

'hello' **Value**

-87.8   **Value**

-        **Operator**

/   **Operator**

+   **Operator**

6   **Value**

2. What is the difference between string and variable?

String is a datatype which can be empty or contain data of alpha-numeric and special characters type, whereas variables are like symbols that are used to name/access the data, they can store any type of values.

3. Describe three different data types.

String, integer, float, list, bool

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

Expressions are made up of values & operators. They can be used to evaluate and return a single output/value.

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

spam = 10 is an assignment statement that assigns the value integer 10 to variable spam. Hence statement is that does something like assignment to variable or calling a function, And expression represents/contains values and/or operators that can be evaluated to return a output.

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

bacon = 22

bacon + 1

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 because it follows all the python variable naming convention, whereas 100 does not, which are:

1. **must start with letter or underscore, and only contain alpha-numeric characters**
2. **should not start with number**
3. **only contain alpha-numeric characters or underscore**

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

Int(value), float(value), string(value)

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

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

Only strings can be appended to strings, hence by converting 99 to string type it can be solved. As follows:

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