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

**Ans:**

\*  - Expression

'hello' - Values

-87.8 - Values

-  - Expression

/ - Expression

+ - Expression

6 - Values

2. What is the difference between string and variable?

**Ans:**

Variable is container to store different data types which can be used to perform different operation on the data,

String is a particular data type used to describe English characters, smiley and character of other language

3. Describe three different data types.

**Ans**:

Three different data types are:

* Int - for integer type data
* Float - for decimal type data
* Str - for string type data

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

**Ans:**

An **Expression** is combination of value, [variables](https://codepict.com/python-variables/), [operators](https://codepict.com/python-operators-everything-you-need-to-know/) and [function](https://www.w3schools.com/python/python_functions.asp) output  that always returns a value.

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

**Ans:**

| **Expression** | **Statement** |
| --- | --- |
| An expression will always give some value | A statement executes something and create some change like assigning of values to a variable or printing values in console |
|  |  |
| Running an expression always returns a value. | Execution of a statement may or may not return any value, it only does whatever the statement says. |
| Every expression can’t be a statement. | Every statement can be an expression. |
| **Example:** >>> a + 19 >>> 20 | **Example:** >>> x = 5 >>> print(x)  **Output:** 5 |

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

bacon = 22

bacon + 1

**Ans:**

Bacon still contains 22 because it has not been updated

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

'spam' + 'spamspam'

'spam' \* 3

**Ans:**

'spam' + 'spamspam' - 'spamspamspam'

'spam' \* 3 - 'spamspamspam'

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

**Ans**: Because python doesn’t allow variable name to be completely numeric alphanumeric is allowed but that too has to start with alphabet, like avc8 is allowed but 8abc is not allowed

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

**Ans**:

* Int - for integer type data
* Float - for float type data
* Str - for string type data

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

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

**Ans:**

Here 99 is integer and rest of the expression contains string, strings and integer cant be concatenated in python. Solution is to put 99 between quotes to make it string like this

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