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?

ANS:

A Variable is a store of information, and a String is a type of information you would store in a Variable.

A String is usually words, enclosed with ""

Eg String x ="Welcome to iNeuron" X is the Variable, and we declared it as a String, use the single = to assign the value to it.

3. Describe three different data types.

ANS:

|  |  |  |
| --- | --- | --- |
| Data Type | Definition | Examples |
| Integer (int) | Numeric data type for numbers without fractions | -707, 0, 707 |
| Floating Point (float) | Numeric data type for numbers with fractions | 707.07, 0.7, 707.00 |
| String (str or text) | Sequence of characters, digits, or symbols—always treated as text | hello, +1-999-666-3333 |

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

ANS:

A combination of operands and operators is called an expression. The expression in Python produces some value or result after being interpreted by the Python interpreter. An expression in Python is a combination of operators and operands.

An example of expression can be : x=x+10. In this expression, the first 10 is added to the variable x. After the addition is performed, the result is assigned to the variable x.

The expression in Python can be considered as a logical line of code that is evaluated to obtain some result after being interpreted by the Python interpreter

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

|  |  |
| --- | --- |
| Statement in Python | Expression in Python |
| A statement in Python is used for creating variables or for displaying values. | The expression in Python produces some value or result after being interpreted by the Python interpreter |
| A statement in Python is not evaluated for some results. | An expression in Python is evaluated for some results. |
| The execution of a statement changes the state of the variable. | The expression evaluation does not result in any state change. |
| A statement can be an expression. | An expression is not a statement. |
| **Example :** x=3. **Output :** 3 | **Example**: x=3+6. **Output :** 9 |

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

bacon = 22

bacon + 1

ANS: bacon =22

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

'spam' + 'spamspam'

Ans: spamspamspam

'spam' \* 3

Ans: spamspamspam

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

Ans: A variable name must start with a letter or the underscore character. A variable name cannot start with a number.

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

Ans:

str()  
int()  
float()

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

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

Ans:

This expression causes and error because in this line 'I have eaten' and 'burritos' are strings, while 99 is treated as integer. In order to fix the error and print 'I have eaten 99 burritos.', 99 needs '' around it to treat it as a string.

'I have eaten ' + ‘99’ + ' burritos.'