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' -- values(string)

-87.8 -- values(float)

- -- Expression

/ -- Expression

* -- Expression

6 -- values(float)

2. What is the difference between string and variable?

Ans –

|  |  |
| --- | --- |
| String | Variable |
| Strings are Data Types used for storing text or alphanumeric data which are immutable. | Variable is used to store data in python it is like an empty memory space we can assign which can be assigned any data |
| These are stored used pair of inverted commas od inverted double commas(‘’,””) | They can be assigned any Data Type be it Strings, Integers, float, Boolean, complex, etc |
| Eg. – “Name”, “Age”, “Hello123”, etc. | Eg. – x = 10, y = “Name”, Z= True, etc. |

3. Describe three different data types.

Ans – Numeric – int, float and complex no fall in this category.

Sequence Type – string, list and tuple fall in this category.

Boolean – True and False type of data.

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

Ans - Expression : Expression Is consists of operators, variables along With logical syntax. We All know that syntax are different For different programming languages.

What They Do : For Any kind of logical operation If you want to build then this mathematical expression will Help. Because without that you cannot make Any logic statements.

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

Ans - An Expression always evaluates to a value. Like 3 + 5 which will give 8 as output

A statement does something, like creating a variable or displaying a value, it only does whatever the statement says. Like X =5 we are assigning value to the variable or using print statement.

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

bacon = 22

bacon + 1

Ans – bacon = 22 (because we have not changed the value of the variable bacon)

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?

Ans – 100 cannot be used as variable name as it stars from a number and according to rules that is not allowed. While eggs is just a text we can assign any value to it.

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

Ans - int(), float(), str() functions are used to get this values.

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

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

Ans – During concatenation the Data types of all the entries must be same here 99 is int type and rest are string type.