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 - string)

-87.8 (value – float)

- (expression)

/ (expression)

+ (expression)

6 (value – integer)

2. What is the difference between string and variable?

|  |  |
| --- | --- |
| **string** | **variable** |
| Strings is a data type for a a sequence of characters, to store in a variable | Are symbols to store data in a program. |
| String is a collection of alphabets, words or other characters | A variable can store everything from strings to numbers |
| strings are "immutable" | Variable can be mutable as well as immutable. |

3. Describe three different data types.

|  |  |
| --- | --- |
| Numeric | Numeric data type represents the data that has a numeric value. The numeric value can be an integer, floating number, or even complex number. These values are defined as int, float, and complex classes |
| Bool | The python data type bool is used to store two values i.e True and False . Bool is used to test whether the result of an expression is true or false. |
| String | are arrays of bytes, A string is a collection of one or more characters put in a single quote, double-quote or triple quote |

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

Answer.

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated.

Ex:- a+b=c

Expressions perform different operations as per the user requirements.

Ex:

Add – a+b

Multiply – a\*b

Divide – a/b

Subtraction – a-b

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

|  |  |
| --- | --- |
| Expression | An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. |
| Statement | A statement is an instruction that the Python interpreter can execute. |

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

bacon = 22

bacon + 1

Answer: 23

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?

Answer:

Because we cannot start a variable name with a number so 100 as a variable name is invalid

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

Answer:

int() – for integer

float() – for float

str() – for string

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

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

Answer:

This expression will give error because a string and an integer value can’t be added it will give type error.

To fix this we can write 99 in single quotes so that python compiler will consider as string and concatenate the complete string.

'I have eaten ' + ‘99’ + ' burritos.'