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.

|  |  |
| --- | --- |
| \* | Mathematical Operator |
| ‘hello’ | String |
| -87.8 | Integer |
| - | Mathematical Operator |
| / | Mathematical Operator |
| + | Mathematical Operator |

2. What is the difference between string and variable?

A string is a datatype used for text-based operations whereas a variable is a memory location that can hold various types of data

3. Describe three different data types.

String - this datatype is used for storing text values that can be any alphabets, symbols or numbers. It can also be described as a set of characters that can also comprise of whitespaces.

Integer - this datatype is used for storing absolute positive and negative numbers. This does not support decimal or fractional numbers.

Boolean – this datatype is contains two states only like true and false or on and off. This is often required in conditions denoting a decision or a condition.

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

An expression is made up of data and operational symbols that manipulates the data according to the given instructions.

Expressions manipulate the given data according to the given operations to produce a value

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

Expressions manipulate data to produce new values. A statement denotes an instruction that the interpreter can use to execute the program. A statement can include an expression for commands like assignment or returning a value.

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'

'spam' \* 3

‘spamspamspam’

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

Variable names cannot begin with a numeric character thus making 100 invalid as a variable name

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

int()

float()

str()

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

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

This expression causes error due to datatype mismatch. To correct we can surround 99 with quotes to make it a string

'I have eaten ' + ‘99’ + ' burritos.'