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:**

Values: **'hello'**, **-87.8**, **6**

Expressions: **\*** , **-** ,  **/** ,  **+**

2. What is the difference between string and variable?

**Ans:**

**String** is a datatype, denotes in single or double quotes. It has a value. Eg: “abcd”, “123”, “12abc”

**Variable** is the name of storage place. It points to the memory location where the data is stored.

3. Describe three different data types.

**Ans**:

**Integer:** Integers are zero, positive or negative whole numbers. Eg: 23, -87

**Float:** Floating point numbers are the real numbers with decimal values. Eg: 34.78, -536.009

**Boolean:** In Boolean data type, there is only two values, **True** and **False**. True represents 0 and False represents 1.

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

**Ans:**

An expression consists of operators and values. It always evaluates down to a single value.

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

**Ans:**

An expression consists of operators and values. It always evaluates down to a single value.

Statement consists of a variable name, assignment operator and the value to be stored. It does not evaluate down to a single value.

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

bacon = 22

bacon + 1

**Ans:**

After running the following code, variable bacon contains 22. Reassignment is note given in the code.

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

'spam' + 'spamspam'

'spam' \* 3

**Ans:**

Both expressions evaluate to the string ‘spamspamspam’

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

**Ans:**

Variable name can not 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:**

The function used to get the integer is int(), floating-point number is float() and string is str().

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

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

**Ans:**

The string can be concatenated with other strings only. In the given expression 99 is an integer.

The error can be fixed by converting integer to string.

'I have eaten ' + str(99) + ' burritos.'