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

* **Solution:**

**Values = ‘hello’, -87.8 , 6**

**Expressions = \*, / , - , +**

2. What is the difference between String and variable?

* **Solution:**

**Variable:**

A variable is a named location used to store data in memory.

For example: a=5

**String:**

. A string is a type of value of that can be stored in a variable.

For example: x=”Hello”

3. Describe three different data types.

* **Solution:**

1. Integers
2. Floats
3. Strings

**Integers:**

Integers are whole number ,without a fractional component. They can be positive or negative.

For example: y = -6

**Floats:**

Floats represent real numbers and are written with a decimal point.

For example: y = -6.00

**Strings:**

Strings are sequences of character data. They are created by enclosing characters in quotes.

For example: a = “hello”

Lists and Dictionary also are the accompanying types.

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

**Ans**:

A combination of operands and operators . Expressions are representations of values. They are different from statement in the fact that statements do something while expressions are representation of value.

For example Any string is also an expressions since it represents the value of the string as well .

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

**Ans**:

An expressions ,evaluate to a single value . A statement does not.

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

bacon = 22

bacon + 1

**Solution:**

The bacon variable is set to 22.The bacon +1 expression doesn’t reassign the value in bacon that would need an assignment statement: bacon = bacon+1

=23

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

'spam' + 'spamspam'

'spam' \* 3

**Solution:**

The two terms to be values are ‘spamspamspam’

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

**Solution:**

Variable names cannot start with a number.so while 100 is invalid

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

**Solution:**

The int(), Float(), Str() functions will evaluate to the integer,floating-point number,or string version of a values passed them.

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

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

**Solution:**

Because 99 is an interger and strings can be connected to other strings with the +operator .

The expression is , ‘I have eaten’ + Str(99) + ‘burritos’.