**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'. - Values

-87.8. - values

- - Expression

/ - Expression

* - Expression

6 - values

**2. What is the difference between string and variable?**

- Strings are characters or values representing text. Strings always start and end with quotes

- Variables are symbolic names use to store data.

Variable: hello  
 String: 'hello'

**3. Describe three different data types.**

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

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

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

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

Expressions are combination of values, variables , functions & operators.

Expression produces some value or result after being interpreted.

All expressions evaluate (that is, reduce) to a single value.

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

An expression evaluates to a single value. A statement does not.

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

**bacon = 22**

**bacon + 1**

The bacon variable is set to 20. The bacon + 1 expression does not reassign the value in bacon (that would need an assignment statement: bacon = bacon + 1)

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

**'spam' + 'spamspam'**

**'spam' \* 3**

Both expressions evaluate to the string 'spamspamspam'

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

Variable names cannot begin with a number.

**9. What three functions can be used to get the integer, floating-point number, or string**

**version of a value?**

The int(), float(), and str() functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.

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

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

The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings with the + operator. The correct way is I have eaten ' + str(99) + ' burritos.'.