**Python Assignment 1**

**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' :** value

**-87.8 :** value

**- ]**

**/ ]** = Expression, assuming some values are missing

* **]**

**6 ]**

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

String is a data type, while Variables are containers for storing data values.

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

Text Type: str

Numeric Types: int, float, comples

Sequence Types: list, tuple, range

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

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result.

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

A statement in Python is not evaluated for some results. An expression in Python is evaluated for some results. The execution of a statement changes the state of the variable. The expression evaluation does not result in any state change.

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

**bacon = 22**

**bacon += 1**

It will print bacon = 23

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

**'spam' + 'spamspam'**

**'spam' \* 3**

Both will print **spamspamspam**

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

eggs is a valid variable name and 100 is invalid, because

Rules for Python variables:

* A variable name must start with a letter or the underscore character.
* A variable name cannot start with a number.

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

Below are the three functions that can be used for type casting a values

**int()**

**float()**

**str()**

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

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

**TypeError**: can only concatenate str (not "int") to str

Put 99 in single-quotes like below.

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