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.

\* : **Expression**

'hello':**Value**

-87.8:**Value**

- :**Expression**

/ : **Expression**

+: **Expression**

6 :**Value**

2. What is the difference between string and variable?

**Ans.Variables are symbols that you can use to store data in a program. Strings are data, so we can use them to fill up a variable. String is a type of information you would store in a Variable**.

**Variable: spam  
String: 'spam'  
  
Strings always start and end with quotes**

3. Describe three different data types.

|  |  |
| --- | --- |
| **Text Type** | **str** |
| **Numeric Types** | **int, float, complex** |
| **Sequence Types:** | **list, tuple, range** |
| **Mapping Type:** | **Dict** |

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

**Ans. An expression is a combination of operators and operands that is interpreted to produce some other value. In any programming language, an expression is evaluated as per the precedence of its operators.**

**add = x + y**

**sub = x - y**

**pro = x \* y**

**div = x / y**

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

**Ans. 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

**Ans. The bacon variable is set to 22. 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

**Ans. Both expressions evaluate to the string 'spamspamspam'**

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

**Ans. Varible Name can not start with Number.**

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

**Ans. 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.'

**Ans. 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.'.**