***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' **→ Values**

-87.8 **→ Values**

- **→ Expression**

/ **→ Expression**

* **→ Expression**

6 **→ Values**

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

**Ans**

Variables are like boxes where something like data or any information can be put or stored. Strings are one kind of data that can be stored in the variables.   
 Variables have a certain naming convention. Strings are generally enclosed in quotation marks.

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

**Ans**

Three data types have been descibed below...  
 1. Numeric: These are numbers to be precise. There might be integers, floating numbers containing decimals and complex numbers.

2. Boolean: This type of data contains only two values: True & False reperesented by 1 & 0.

3. Sequential: This data type contains ***strings*** which are just arrays of bytes enclosed by quotation marks, ***lists*** which contain various types of data separated by commas and ***tuples*** which are lists that are immutable or can not be modified.

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

**Ans**

An expression is made up of operators & operands.

To simply put, all expressions produce some values interpreting the which operator are working on which operands.

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

**Ans**

An expression is a description of which operator is operating on which operands. A single value might be returned by interpreting this description. Whereas, a statement generally presents that value and integrates this output with the intended workflow of the program.

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

bacon = 22

bacon + 1

**Ans**

After running this code, the variable bacon contains an integer value 23.

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

'spam' + 'spamspam'

'spam' \* 3

**Ans**

'spam' + 'spamspam' → 'spamspamspam'

'spam' \* 3 → 'spamspamspam'

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

**Ans**

According to the variable naming convention, a variable name must contain only alpha-numeric characters & the name can’t start with a number. It can only start with a letter.  
  
 In accordance with this, ‘eggs’ is valid but ‘100’ isn’t because it starts with a number.

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

**Ans**

Int(), float() and str() functions can be used in the stated case.

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

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

**Ans**

The expression about will return an error because strings can’t be concatenated with an integer 99.

To fix this, we need to convert the integer into a string as following,

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