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.

\* (this is an expression)

'hello' (this is a value)

-87.8 (this is a value)

- (this is an expression)

/ (this is an expression)

+ (this is an expression)

6 (this is a value)

**Ans1**: *see above notes*

2. What is the difference between string and variable?

**Ans2**: String is text value or alphanumeric value which can be stored in a variable. Variables stored different type values like integer, string, Boolean, etc.

For example: varExample – this is a variable

‘varExample’ – this is a value

3. Describe three different data types.

**Ans3**: 1. String, Integer, Boolean, Decimal or Float

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

**Ans4**: Expression is made up of values / variables along with logical or mathematical operators. There are defined rules to write any expression. Expressions do output the result as per the input values and defined logic.

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

**Ans5**: Statement is an instruction to the program and expression is just part of the statement. Statement ‘spam = 10’ include one variable named ‘spam’, numeric value as ‘10’ and assignment operator ‘=’ (equal to symbol).

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

bacon = 22

bacon + 1

**Ans6**: After executing these two statements, bacon variable would contain 22 as value.

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

'spam' + 'spamspam'

'spam' \* 3

**Ans7**: Both above statements will return ‘spamspamspam’.

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

**Ans8**: Variable name must start with a letter or underscore character. So 100 is an invalid variable name whereas eggs is a valid variable name.

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

**Ans9**: str(), int() and float()

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

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

**Ans10**: This expression causes an error as it is concatenating numeric value with string. To fix this error, numeric value needs to be converted to string so that it can be concatenated to string value.

So the right statement is: **'I have eaten ' + str(99) + ' burritos.'**