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?

Variable is something that will store a value (numbers or strings) while string is a type of value that will be stored in a variable.

3. Describe three different data types.

1. Numeric: integers, float, decimals

2. String: Value that contains alpha numeric characters

3. Boolean: True or False

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

Expressions is made of operators and operands. Expressions gets evaluated based on the operators and operands to produce result.

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

Expression involves operators and operands using which a value is evaluated. A statement is something that will either do assignment or print.

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

bacon = 22

bacon + 1

bacon will have 22 if bacon + 1 is not assigned to bacon again. If assigned, it will be 23.

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

'spam' + 'spamspam' – ‘spamspamspam’

'spam' \* 3 – ‘spamspamspam’

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

Variable names should start with alphabet and not numbers. Therefore, eggs is a valid variable name while 100 is invalid.

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

Integer – int()

Floating-point number – float()

String – str()

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

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

‘I have eaten’ and ‘burritos’ are string, while 99 is number. + operator will only evaluate values of same type. If operands are string, + will act as concatenate, if operands are numbers then it will add the values. In this case, since 99 is a number it will error string value attempts to concatenate an integer value. In order to fix, 99 needs to converted to string by using str(99).