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.

**Sol:** \* -operator

'hello'- value

-87.8-value

- : operator

/ : operator

+ : operator

6 : value

2. What is the difference between string and variable?

**Sol:** A string is any value written within ‘’ or “”. Even if the value is an integer, special character, or an operator but written within’’ or “” it is considered as a string.

A variable is a named memory location which stores a value

3. Describe three different data types.

**Sol:** Integer, float and string

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

**Sol:** An expression is made up of an operand and operator (+-/\*=) and values. All expressions help to calculate a value.

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

**Sol:** expression is used to calculate a value and statement is used to perform an action or command like assign a value to a variable in this case.

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

bacon = 22

bacon + 1

**Sol:** 23

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

'spam' + 'spamspam'

'spam' \* 3

**Sol:** spamspamspam

spamspamspam

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

**Sol:** A variable name can be an alphabet, or it can be a letter followed by a number but 100 only is an invalid variable.

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

**Sol:** Ex: a=100.0

int(a): gives integer value of a

float(a): gives float/decimal value of a

string(a): gives string of a but getting a string value of 100 is not possible it will show an error

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

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

**Sol:** It shows an error because 99 is an int value and not string and concatenation is not possible with an int value. Correct method would be:

‘I have eaten’+’99’+’burritos’