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.

\* = mathematical operator

'hello' = String

-87.8 = float and can also be a integer but the result will be -87.

- = mathematical operator

/ = mathematical operator

* = mathematical operator

6 = Integer

2. What is the difference between string and variable?

Ans. String is data type and variable is a container to store different values which be composed of different data types.

3. Describe three different data types.

Ans.

Int - Int is an Integer data type which consists of all the integer from negative values to positive values. It doesn’t take decimal number and fractions into consideration.

Float – float is data type which consists of all the real numbers i.e integers, decimal numbers and fractions (rational and irrational) except imaginary numbers.

String – String is a data type which stores each single character in array format.

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

Ans. Expressions are made up of mathematical operators and bitwise operators etc;

Expressions operate on the values present in the variables.

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

Ans. The assignment statement like spam = 10 assigns the integer value 10 to variable spam whereas if there is an expression within the assignment statement as spam = 2 + 2, value in the variable “spam” will addition of 2 & 2 which is four so here the expression “+” is a mathematical operator which adds the two values.

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

bacon = 22

bacon + 1

Ans. After running the following code, the variable bacon consists of 22 only.

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

'spam' + 'spamspam'

'spam' \* 3

Ans. print('spam' + 'spamspam') Output: spamspamspam

print(‘spam’ \* 3) Output: spamspamspam

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

Ans: Variable names should not start with numbers so “eggs” variable which starts with alphabets is valid compared to variable “100”.

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

Ans. Suppose the number is 3.5

Integer version of 3.5

print(int(3.5))

= 3

Float version of 3.5

print(float(3.5))

= 3.5

print(str(3.5))

=”3.5”

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

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

Ans. We can’t add or concatenate a string and int data type values.

The correction statement is

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

Output = 'I have eaten 99 burritos.'