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.

\*

'hello'

-87.8

-

/

6

Ans : expressions are [ \* , - , / , +].

And the values are [‘hello’, -87.8, 6]

2. What is the difference between string and variable?

Ans : The Variable is the name given to the memory location which holds some value inside of it….and a string is a data type and it could be anything that is compressed inside of single,double or even in triple quotes generally used as texts…

3. Describe three different data types.

Ans : 1…Integer : These are exact numbers like 10,20,30…etc.

2….Float : These are continuous in nature like 20.3,50.09,22.45…etc

3….String : These are the values/text/symbols..etc that are enclosed within single/double/triple quotes..

Like ‘hello’,’12’,’785563’…etc.

4…..Boolean : True or False

5……List, tuple ,set and dictionary…etc

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

Ans: An Expression is made up of operators(mathematical symbols) and operands(variables) to produce/return some mathematical value or some string value…ex: a=10,b=10 and a+b = 20…

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

Ans: In the above example spam=10 we are storing value 10 in the variable name spam is called assignment statement….and if we perform mathematical operation on it we achieve an expression value like…..

spam =10

spam = spam + 10 +20

print(spam)

o/p = 40

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

bacon = 22

bacon + 1

Ans : since bacon + 1 is not an assignment statement, the addition operation is not performed on real/actual variable so the variable bacon still holds the same value 22.

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

'spam' + 'spamspam'

'spam' \* 3

Ans : It returns the same value as spamspamspam.

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

Ans : In both the given variables(eggs and 100) the eggs are of string data type and the 100 is an integer data type …..and the variable 100 violates the identifier rules by starting with number…so that’s why the variable eggs are valid and 100 is invalid variable….(if the 100 is enclosed in single quotes it could be allowed as an identifier).

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

Ans : int() : This function can be used to convert a value to an integer.

float() : this function can be used to convert a value to an float.

str() : this function can be used to convert a value to an string.

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

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

Ans : Concatenation cannot be performed on different data types..

We can fix it likely into this : ‘I have eaten’ + ‘100’ + ‘burritos’.