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?

The variable can be said as the reserved memory location to store values.You can store any kind of datatype in a variable. It means that when you create a variable we reserve some space in memory

The data stored in memory can be different type.String is a one of such data type. It can be defined as set of characters represented in quotation marks(single or double)

3. Describe three different data types.

List : It’s a kind of datatype where items are separated by commas and enclosed inside square bracket [].The items enclosed within the list can be of any data type.Lists are mutable

Eg : x=[1,2,”ff”, [4,6],”the”]

Tuple : The items are separated by commas and enclosed inside paranthesis (). It is immutable

Eg : y=(1,2,4)

Dictionary : It is written in curly bracket {} and items are separated by commas.It has key and value pair.It is mutable

Eg Z= {“name”:” john” ,”standard” =10}

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

Expressions always returns a value.It is any combination of literals,operators and variables

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

Expressions always returns a value.Expressions are made of literals,perators and variables.Expressions will evaluate to a single value

Statements cannot return a value.An assignment statement consist of expression on right hand side ,whose value is stored in the variable in left hand side.

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

bacon = 22

bacon + 1

bacon will have 22.Because we have assigned it as 22 initialy and didn’t made any futher assignment.

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

'spam' + 'spamspam' = ‘sapmsapamspam’

'spam' \* 3= ‘spamspamspam’

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

Variable is a unique identifier for the value.When you refer a variable, the python will read the value associated with the variable.

Variable themselves are not values.So if you give a variable name that is equal to the value , python cant distinguish which is value an dwhich is variable.Variables cannot be any data type.

Egg is not any kind of data type.But 100 is an integer value,hence a data type.Thats why egg is a valid variable,100 is not.

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

Int() , float(), str()

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

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

The string concatenation will only work if all elements are string.Here 99 is an integer. If we have to fix it change 99 to string.

‘I have eaten’+str(99)+’burritos’