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

Answer – Values are ‘hello’ , -87.8 , 6

Expression are \* , - , / , +

2. What is the difference between string and variable?

Answer – string is a type of a context when we define something with either word, sentence, character and may contain numbers as well and must be inside inverted comma.

Variable is something when it is not fixed and get changes time to time. Suppose if we define a word with a value and use that defined word in different code so when the value of that word will change the output of the code will also change.

3. Describe three different data types.

There are multiple data type is in python like string, integer, float, dict, set, tuples, list etc.

Answer String – we call data type string when we define something inside inverted comma, can be single or double inverter comma and must not contain any braces before inverted comma, but it may contain braces inside inverted comma.

Integer – Data type integer is a whole number value without braces, inverted comma and must not be with any decimal numbers.

Float – Data type float is also numeric value but must have decimal value and must not be covered with braces or inverted comma.

Dict – when we define something inside curly braces with a context against a context using colon symbol between it, context can be inside single/ double inverted comma if it is string then we call such data as dict data type.

Set – Set is also similar to dict data type it use to covered inside curly braces but it use to be like a list every each thing comes after a comma and doesn’t include colon.

Tuples – we call tuples as data type when defined value is inside normal braces () and must contain more the one index.

List – when we define a data set inside square braces , more than 1 index is called list.

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

Answer – expression are mathematical symbols or any inbuilt code which defines what we need to do with the given data . expressions push the data in the correct direction so we get the correct output.

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

Answer spam = 10 is an statement.

Statement is when we define something with a string, value etc  
 after defining the data set when we give expression it directs the given data set to a correct direction to get the correct output.

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

bacon = 22

bacon + 1

Answer bacon + 1 = 23

Variable bacon will still be 22 , but when we add + 1 into bacon that time we will get 23 output as bacon has 22 value.

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

'spam' + 'spamspam'

'spam' \* 3

Answer 'spam' + 'spamspam' = spamspamspam

'spam' \* 3 = spamspamspam

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

Answer Eggs is a valid variable name as we can assign different value of it as per our requirement whereas 100 is constant value and won’t get changed.

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

Answer a = 100

b = str(a) this will change the integer to string data type.

a = 34.23

b = int(a) this will change a value to integer

a = 232

b = float(a) this will change a value to floating number.

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

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

Answer We cannot add string with integer, but we can do onething we can convert the integer to string by putting it inside the inverted comma then it will work.

'I have eaten ' + ‘99’ + ' burritos.'