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.

\* 🡪Arithmetic operator

'hello'🡪string datatype value

-87.8🡪Integer datatype

- 🡪Arithmetic operator which does subtraction operation

/ 🡪Arithmetic operator which does division operation

* 🡪Arithmetic operator to do addition operation

6 Integer value

2. What is the difference between string and variable?

Ans: String is a data type

Variable is a place holder which helps us to store the values

3. Describe three different data types.

Int -It is a datatype which helps us to store integer. It cannot store fractional part

Float -this helps us to store the decimal values as value

Boolean-this data type can just have two values -which is True and False

String-This is a collection of characters stored in either single quote or double quotes

In Python we don’t have data type which helps us to store a character unlike C and Java

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

Ans: Expression is made of Operands and Operators

Expression helps us to perform some kind of operation

Ex1:

a=5+10

Here 5 ,10,a are operands where as + is arithmetic operator ,= is assignment operator

And the expression can be called as Arithmetic expression

An expression will helps us to return some value or do some kind of operation

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

Spam=10 is just a python statement

Ans: Expression evaluates to a value and even we can store it

Statement is like creating a new variable or printing something on the console .it just instruct the interpreter what to do but it does not return anything

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

bacon = 22

bacon + 1

Ans:bacon value does not change as we did not assign the bacon+1 to bacon again

bacon+1 is statement it just prints 23 in console if we execute , where bacon=bacon+1 is an arithmetic expression where it will help us to update the value o bacon to 23

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

'spam' + 'spamspam'

Above will result in concatenation of string and result in ouput of ‘spamspamspam’

'spam' \* 3

This will also result in ‘spamspamspam’

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

There are few rules while declaring the name of variable .one among them is never start variable name with a number .And here we violated the same

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

int(98.999)---🡪will give output as 98

float(89)-🡪will give output as 89.0

str(98)-🡪will give output as ‘98’

By using the above three functions we can see that we are able to fetch /convert a value to our required type

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

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

99 is an integer and other two are string data types

Combining them will be an error because that operation is not allowed

In order to make it successful convert 99 int datatype to string type .then it will work

Below is the working statement

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