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' Value

-87.8 Value

- Operator - Expression

/ Operator - Expression

* Operator - Expression

6 Value

2. What is the difference between string and variable?

Variables are temporary pockets that store values assigned to a variable name by ‘=’ expression.

Eg: >>> a = 5

#here ‘a’ is the variable that stores 5 as it’s value.

String is a value assigned to a variable in quotes (it could be 1,2 or 3 quotes), it is a type of primitive data that python uses as an input.

Eg: >>> b = ‘India’

#here ‘a’ is the variable that stores ‘India’, a string as it’s value.

3. Describe three different data types.

1. **String** is a value assigned to a variable in quotes (it could be 1,2 or 3 quotes).

Eg: ‘name’ , ‘12’, ’35.5569’, etc.

2. **Integers** these are numbers without decimals or with a power of 10.

Eg: -1,4,7,999, etc.

3. **Floats** are numbers that have decimal points.

Eg: -5.35, 37.5, 3.25, etc.

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

An expression is the representation of a value, be it a string or a number.

It is something that is to be evaluated by the interpreter.

Eg: >>> 1+1 is an expression.

Expressions tell the interpreter about what is to be evaluated.

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

Expression is something that is to be evaluated by the interpreter and you get the result directly on screen.

Eg: 1+1

>>>2

Statements are of two kinds: print and assignment

An assignment statement won’t show the result on screen unless it is called for or the print statement is used.

Eg: a = 5 (won’t print anything as a result)

print(a) (it’ll print the value assigned to the variable.

>>> 5

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

bacon = 22

bacon + 1

It contains the value ‘22’.

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

'spam' + 'spamspam'

>>> ‘spamspamspam’

'spam' \* 3

>>> ‘spamspamspam’

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

It is so because python cannot assign values to one of its primitive data types.

Another reason could be that it’s a universal value, a 100 is a 100 no matter what, it cannot be set to any other value.

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

int() , float() and str()

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

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

This expression causes an error because the ‘+’ operator can only concatenate same data types, here we have two stings and one integer.

We can fix it by converting the integer to a string

'I have eaten ' + str(99) + ' burritos.'

>>> 'I have eaten 99 burritos.'