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' - String

-87.8 - Integer

- - expression

/ - expression

+ - expression

6 - Integer

2. What is the difference between string and variable?

A variable is a object that holds data

Eg: a=10, Variable a is storing data as 10

String is a data type which is a collection of alphanumeric letters.

A string can be defined by enclosing data in Single / Double quotes( ‘<data>’ / “<data>”)

Eg str= “This is a string”

3. Describe three different data types.

Integer , String, Tuple

1. An integer data type holds numeric data without decimals

a=10.5

print(int(a))

Output: 10

B) String is a data type which is a collection of alphanumeric letters. A string can be defined by enclosing data in Single / Double quotes ( ‘<data>’ / “<data>”)

str1= "This is a string"

str1

Output: This is a string

1. Tuple is a data type in Python used to store collections of data. Tuples are immutable and can store data of different data types in one variable. Tuples are enclosed within round brackets separated by commas.

a=(10,15,'sdf',6+7j)

a

Output: (10, 15, 'sdf', (6+7j))

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

An expression is made up of operator and operands.

Eg A+B

Here A and B are operands on s=which the operations is performed, the ‘+’ is the Operator

Multiple types of operators are as follows

|  |  |
| --- | --- |
| Arithmetic | +, - , / ,\*, % , //. |
| Logical | AND , OR, NOT |
| Assignment | == , <= , >= , != |

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

Expressions are line/lines of code that perform certain task and return a value. While Statement usually do not return anything and only used for assigning values.\

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

bacon = 22

bacon + 1

**23**

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

'spam' + 'spamspam'

'spam' \* 3

**spamspamspam**

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

A variable name cannot start with a digit.

A variable name can have an integer only after a character

Eg: e100 is a valid variable name

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 above expression causes an error since a string is being concatenated to an integer.

It can be fixed by containing the entire statement within single/ double quotes

‘I have eaten 99 burritos’

OR

Converting the integer to a string

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