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.

\* - it is an expression

'hello' – it is a value

-87.8 – it is a value

- - it is an expression

/ - it is an expression

* - it is an expression

6 – it is a value

2. What is the difference between string and variable?

Strigs are characters defined within single or double quotes. They can be letters, numbers, characters etc. Strings are type of variable.

For example ‘abcd’, “sudh”,”44+7j”

variables are required to define values. Variables once defined can be used later easily using memory assigned.

For example a=4, b=”sudh”, a,b=4,7,

3. Describe three different data types.

1. Numeric data type can integer, float, complex number.

Integer- denoted as int. It stores whole numbers. Examples are 3, 4, 5

Float- it stores decimal values. Examples are 3.4, 6.0

2. String- its is defined using single quote or double quote. For example “dinesh”

3. Tuple- collection of items denoted within brackets (). It is immutable unlike lists.

For example a=(2,3,4,5)

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

Expression is made up of values, containers, and mathematical operators. For example a=10+20

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

Expression is made up of values, containers, and mathematical operators and the statement is just like a command that a python interpreter executes like print.

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

bacon = 22

bacon + 1

variable bacon contains 23.

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?

For 100 it gives syntax error as cannot assign to literal.

A variable must start with letter or underscore.

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.'

It gives type error. Strings can’t concatenate with numbers.

We can use quote number to use it as string.

‘I have eaten+’99’+’burritos.’