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' ->values

-87.8 ->values

- ->expression

/ ->expression

* ->expression

6 ->values

2. What is the difference between string and variable?

**String**: String are set of characters or words. Generally written in single quotes or double quotes.

Example: “ It’s Rainy Day”

**Variables**: Variable are containers to which we assign values or an expression and later on use those variables to access or print the values or expressions. Variables are of different types- integer(int), string(str), Boolean(bool), float.

Example: a = “Today is Saturday”

Here , variable “a” is of string type.

3. Describe three different data types.

Data types are-

1. Int - integer type. We use int for accepting numeric values.
2. Str – String type. We use str for accepting set of words or set of characters.
3. Bool – Boolean type. We use Boolean for accepting True/False values, where True means 1 and False means 0.
4. Float- Float type. We use float for accepting decimal values.

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

Expression is made up of operators and operands in any order. We use expression to evaluate certain mathematical expressions.

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

Statement – Any line is python is statement and ends with new line character.

Example- spam= 10 (this is assignment statement )

Expression - Expression is made up of operators and operands in any order. We use expression to evaluate certain mathematical expressions.

Example – a+b-c\*f/e^g

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

bacon = 22

bacon + 1

**Bacon** variable contains 22 only. Because in the next line bacon is incremented by 1 but the incremented values is not assigned back to the bacon variable and hence values remains the same for the bacon variable.

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?

According to the naming convention variable name can not be a numeric value.

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

Three functions are:

1.int

2.float

3.str

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

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

We can concatenate string with string only.

In order to fix it we need to convert 99 which is numeric value to string and then try to concatenate.

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

Here, we have used Str() function which converts numeric values to string.