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 - Arithmetic Operator use for multiplication

**'hello'**  - Value - String

**-87.8** - Value - Float Value

**-**  - Expression - Arithmetic Operator use for Subtraction

**/ -** Expression - Arithmetic Operator use for Division

**+** -Expression - Arithmetic Operator use for Addition

**6** - Value - Integer

2. What is the difference between string and variable?

String is a data type . It is a sequence of characters. Always written inside “ ” or ‘ ‘ .

Where as Variable is a container for storing a data value(s). A variable can hold integer , float , Boolean or string vaues.

3. Describe three different data types.

Integer – ‘int’ -represents Decimal values e.g – 34, 580,

Float – ‘float’ - represents float values – e.g – 2.5 , 1.0008

Strings – ‘str’ – represents string values e.g – ‘rakesh’ , ‘78’ , ’98.76’ , “iNeuron FSDS”

Boolean – ‘bool’ – represents TRUE ,FALSE

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

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. It performs operation between operator and operands.

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

**An expression usually refers to a piece of code that can be evaluated to a value** and is composed of variables, operators, function calls, and literals.

**A statement refers to a piece of code that executes a specific instruction or tells the computer to complete a task.**  A statement can take the form of assignments, control statements, import statements, loop statements, jump statements, or method calls.

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

bacon = 22

bacon + 1

bacon will contain the value 22 , because after adding 1 to bacon , it is nor reassigned to the variable bacon. So it will contain the same value it was containing before.

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?

As per the variable naming convention , A variable name must start with a letter or underscore ’\_’ . It must not start with a number .

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

The int() , float() , str() functions can be used to get the integer, floating-point number or string version of a value. It is also called typecasting.

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

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

This expression will cause an error because we can not concatenate a string with an integer value or an integer value with a string . We can fix this by writing the integer value inside quotes.

'I have eaten ' + ‘99’ + ' burritos.'