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' - Value**

**-87.8 - Value**

**- - Expression**

**/ - Expression**

* **- Expression**

**6 - Value**

2. What is the difference between string and variable?

**Variables are symbols that we can use to store the data in a program.** **We can think of them as an empty box that you fill with some data or value.**

**Strings are data, so we can use them to fill up a variable**.

3. Describe three different data types.

**Integer - It is the most common numeric data type used to store numbers**

**Floating Point (float) = example: 10.5,2.6,5.6,2.3 etc**

**String (str or text) = example : ‘ineuron’, ‘padma’, ‘datascience’ etc**

**Boolean (bool) = example : TRUE / FALSE**

**Array: ex: array of numbers**

**Date : EX: day, month and year**

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

**Expression: An expression is a combination of operators, constants and variables. An expression may consist of one or more operands, and zero or more operators to produce a value.**

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

**An expression evaluates to a single value.** **A statement does not.**

**Statements represent an action or command e.g print statements, assignment statements**

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' = ‘**spamspamspam**’

'spam' \* 3 = ‘**spamspamspam**’

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

**Because variable cannot begin with number. Here eggs is not begin with number since it’s a variable. But 100 begin with numerical number, so it’s not a valid variable.**

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

**The int() , float() , and str( ) functions will evaluate to the integer, floating-point number, and string versions of the value passed to them**

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

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

**This expression causes an error because strings can be concatenate with only strings with + operator, here 99 is an integer. So we have to convert this 99 to string as follows**

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

**Or**

**'I have eaten ' +'ninty nine' + ' burritos.'**