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.

\* ­-> Multiplication

'hello' -> String

-87.8 -> Float

- -> Subtraction

/ -> Division

+ -> Addition

6 -> Integer

2. What is the difference between string and variable?

* Variable are used to store data. Ex fruit = “apple” here fruit is variable
* Variable must start with alphabet or underscore character (not Number) & they are case sensitive.
* Strings are created by using single quotation or Double
* While slicing the string the first character has 0

3. Describe three different data types.

* Str = Described by using **Text**
* Numeric = it contain Int(9), Float(9.0), Complex(9j)
* Sequence = List[ ], Tuple( ), Range(9)

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

-> Expression is a mixer of values, operators & variables.

* **Arithmetic Expression** :- This Expression used for calculation like addition, subtract, multiplication & Division etc.
* **Logical Expression**:- logical expression used to combine comparison expression & other logical expression, its return Boolean value
* **Integral Expression**:- Integral expression produce only integer results after all computations & type conversions.
* **Floating Expression:**- It return floating point numbers as result.
* **Relational Expression**:- In these types of expressions, arithmetic expressions are written on both sides of relational operator (> , < , >= , <=).
* **Bitwise Expression**:- There expression used to perform computation at bit level
* **Combinational Expressions**:- use different types of expressions in a single expression, and that will be termed as combinational expressions.
* **Constant Expression**:- Constant expression have constant Values Only

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

-> Expression will be 10 because an expression is the combination of values & spam = 10 is the statement because it carries out the task of assigning 10 to spam

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?

-> Variable name can’t start with number & eggs variable name is staring to letter

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

-> 1) Str() used to get sting version of the value

2) Int() function used to get integer version of value

3) float() used to get floating-point number of the value

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

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

* 99 is integer, Integer & String don’t concatenate because both are different data type

To fix it we need to code:-

“I have eaten” + ” “ + ”99” + ” “ + ”burritos”