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**

- **expressions**

/ **expressions**

* **expression**

6 **values**

2. What is the difference between string and variable?

**String refers to the specific data type while variable is the who store values like strings, numeric, Boolean, dictionary, list, tuples, and sets.**

3. Describe three different data types.

**Strings: consist of words or characters (immutable)**

**Numeric: floats, integers, and complex numbers (immutable)**

**List: can consist of different data type enclosed with brackets (mutable)**

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

**In Python, an expression is a combination of values, variables, operators, and function calls that evaluates to a single value.**

**Expressions can consist of literals (such as numbers and strings), variables, and operators, which are used to perform various operations on the values. Function calls can also be part of expressions, allowing for more complex operations and computations.**

**All expressions in Python have a return value that is computed based on the values and operators used in the expression. For example, the expression 2 + 3 would evaluate to the value 5, and the expression "Hello " + "world!" would evaluate to the string "Hello world!".**

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

**The main difference between an expression and a statement is that expressions produce a value, whereas statements do not necessarily produce a value. Instead, statements are used to perform some action, such as assigning a value to a variable, controlling the flow of execution in a program, or printing output to the console.**

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?

**100 is not valid since variable names in python cannot start with numbers**

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

**int ()**

**str()**

**float()**

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

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

**Because string+ int is not allowed.**

**‘I have eaten + ‘99‘ + burritos.’**