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 used to store any type of data or information , also they are both mutable and immutable.

Strings are also called as character arrays, as they are the line of character and they are immutable

3. Describe three different data types.

🡪 int- It is used to represent integer value.

Float- It is used to represent floating point numbers,

Str – It represents string data.

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

🡪 It is a combination of one or more values, operators, and/or function calls that can be used to calculate a combined result. Programming expressions are all created to yield a single output that may be applied to other areas of the programme. A result from an expression that adds two numbers, for instance, could be utilised in a conditional statement, written to the screen, or given to a variable.

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

🡪 A statement is a whole line of code that carries out a single operation, like assigning a value to a variable, whereas an expression is a mixture of values, operators, and function calls that can be evaluated to create a result.

In the example you gave, the expression spam = 10 tells the variable spam to have the value of 10. The equation that evaluates to the value 10 on the right side of the equals sign is 10.

A statement is a whole line of code that performs an action, such as assigning a value, producing output, or iterating over a list of instructions. An expression, on the other hand, is a smaller portion of a statement that creates a value.

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

bacon = 22

bacon + 1

🡪 bacon=23

7. What should the values of the following two terms be?

'spam' + 'spamspam'

'spam' \* 3

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

🡪 In python, numbers cannot be a variable name.

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

🡪 int() for integer, float() for floating-point number, str() for string.

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

'I have eaten ' + 99 + ' burritos.

🡪 Here, 99 is an integer value , by writing it as ‘99’ or str(99) can fix the error, this error is because we can concatenate a string and integer without converting 99 to string.