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.

\*

'hello'

-87.8

-

/

6

Ans : 'hello' is an value and \* , -87.8 , - , / , + , 6 is an expression or (mathematical operators.

2. What is the difference between string and variable?

Ans: strings - characters enclosed in quotes (single or double). These characters can be letters, numbers, symbols, or even spaces.

Variable - variable as a container that can store different kinds of data, and you can refer to it by its name

3. Describe three different data types.

Ans: **Integer - This data type represents whole numbers, like 1, 10, -5, or 2023.**

String - Strings are used for storing text, names, addresses, or any other kind of textual data.

Boolean - This data type can only hold two values: True or False, Booleans are often used for making decisions in programs, like checking if a condition is met or if a user has logged in.

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

Ans : What makes up an expression - it's a combination of the elements Operands, Operators and Functions.

What do all expressions do -The main purpose of expressions is to communicate a computation and produce a single value as the result. This value can then be used in various ways, such as:To perform calculations and transformations, To make decisions and control program flow etc.

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

Ans : expression - it's a combination of the elements Operands, Operators and Functions.

Statement - A command that assigns a value to a variable. It combines an expression (like 2 + 3) with an assignment operator (=) and a variable name (spam).

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

bacon = 22

bacon + 1

Ans: 22

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

'spam' + 'spamspam'

'spam' \* 3

Ans: spamspamspam

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

Ans - Variable names can only begin with a letter (a-z, A-Z) or an underscore (\_).

The remaining characters in a variable name can be letters, underscores, or digits (0-9).

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

Ans – These 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 version of a value

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

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

Explanation - The given expression causes an error because you are trying to concatenate a string with an integer without converting the integer to a string. In Python, you cannot concatenate a string with an integer directly.

Solution = I have eaten ' + str(99) + ' burritos.'