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?

Ans🡪In Python, a string is a data type that represents a sequence of characters. It is used to store and manipulate textual data.

A variable, on the other hand, is a named container used to store values. It acts as a placeholder to represent data of any type, including strings. Variables can hold different types of data, such as numbers, strings, lists, or objects.

3. Describe three different data types.

Ans🡪 Integer, String and List

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

Ans🡪An expression in programming is made up of one or more operands combined with operators. An operand can be a value, a variable, or the result of another expression. Operators act upon the operands to perform specific operations and produce a new value.

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

Ans🡪

Expression :

An expression in Python is a combination of values, variables, operators, and function calls that evaluates to a single value. Expressions are typically used to perform calculations, retrieve data, or produce results.

Statement:

A statement in Python is a complete unit of code that performs an action or carries out a specific task. Statements are usually composed of one or more expressions and control the execution flow of a program. They can include assignments, loops, conditional statements, function definitions, etc.

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🡪 Both terms would have the value 'spamspamspam'.

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

Ans🡪Variable names must start with a letter (a-z, A-Z) or an underscore (\_).

'eggs' is a valid variable name because it starts with a letter ('e') and consists of lowercase letters, which are allowed. It does not conflict with any reserved keywords. Therefore, 'eggs' is a valid variable name.

'100' is an invalid variable name because it starts with a digit ('1') instead of a letter or an underscore.

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

Ans🡪 int(), float() and str().

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

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

Ans🡪 'I have eaten ' + str(99) + ' burritos.'