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.

**Ans -**

Values = 'hello' , -87.8 , 6

Expressions = \* , - , / , +

2. What is the difference between string and variable?

**Ans -**

Variable is the storage of information and strings are stored in variables. Strings are created using “” or ‘ ‘. Values or information is assigned to a variable using = sign. Variable can consists of different types of data

3. Describe three different data types.

**Ans** -

Integers - integers are simple whole numbers, with no decimal values.Ex, 999

Floats - floats are nothing but numbers containing decimals. Ex, 3.14

Complex Numbers - Complex numbers consists of real part and an imaginary part. Ex, 5x, 26j

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

**Ans** -

Expressions are made up of operators, Values, Functions and Variables. Operators such as Arithmetic operators, Logical Operators, Relational operators, Assignment operators. All expressions perform different types of operations on the data.

Ex, Arithmetic operators perform operations such as addition, subtraction, multiplication, division. Relational operators are used to compare two or more values with each other.

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

**Ans -**

A statement is an instruction that the Python interpreter can execute. Ex, if-else statements

An expression is a combination of values, variables, operators, and calls to functions.

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

bacon = 22

bacon + 1

**Ans** - Variable bacon contains the integer 22

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

'spam' + 'spamspam'

'spam' \* 3

**Ans -**

‘spamspamspam’

‘spamspamspam’

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

**Ans -**

Variable names cannot start with a number, they can only start with an alphabet or underscore. That’s why eggs is a valid variable name and 100 isn’t.

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

**Ans -**

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.'

**Ans -**

Because we cannot concatenate integers to strings. To concatenate a number like 99 to the strings we have to use ‘ ‘ or “” for 99. Ex. - 'I have eaten ' + '99' + ' burritos.'