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: values are : 'hello' , -87.8 , 6 and the expressions are : \* , - , / ,+

2. What is the difference between string and variable?

Ans :   
A string is a sequence of characters, while a variable is a named location in memory that can store a value. A string can be stored in a variable, but a variable can also store other types of values, such as numbers or objects.

3. Describe three different data types.

ANS : The 3 types of data types are int , float & string

* Integers : are whole numbers, positive or negative, without a decimal point. For example, 1, 5, 10, -1, -5, and -10 are all integers.
* Floats  : are numbers with a decimal point. For example, 1.0, 5.5, 10.0, -1.0, -5.5, and -10.0 are all floats.
* Strings  :are a sequence of characters, enclosed in single or double quotes. For example, "hello world", "This is a string", and "12345" are all strings.

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

ANS : An expression in Python is a combination of operators and operands that evaluates to a single value. Expressions are made up of the following:

* Operands are the values that are operated on by the operators. Operands can be variables, literals, or other expressions.
* Operators are symbols that perform operations on operands. Operators can be mathematical, logical, or string operators.
* Parentheses are used to group expressions together. Parentheses can also be used to override the default order of operations.

Expressions are used to perform a variety of tasks in Python, such as:

* Mathematical operations: Adding, subtracting, multiplying, and dividing numbers.
* Logical operations: Comparing values and determining if they are equal, greater than, less than, or not equal.
* String operations: Concatenating strings, finding the length of a string, or converting a string to uppercase or lowercase.
* Control flow: Conditional statements, loops, and functions.

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

ANS : The main difference between an expression and a statement is that an expression evaluates to a value, while a statement does something.

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

bacon = 22

bacon + 1

ANS: The bacon will contain 22.

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

'spam' + 'spamspam'

'spam' \* 3

ANS: After executing the above term the output will be : 'spamspamspam' & 'spamspamspam'

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

ANS: because eggs are string character and 100 is a integer we cannot use literal as a variable.

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

ANS: int (), float () , & str()

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

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

ANS: in python we cannot add string with integers

Either we will give as : 'I have eaten ' +”99 “+ ' burritos.'

Here we make 99 as a string by using double quotes .