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?

A string is a sequence of characters enclosed in quotation marks, while a variable is a named container that holds a value. Strings are used to represent text, while variables can hold any type of data, including string.

3. Describe three different data types.

1.Lists are just like arrays, which is an ordered collection of data. It is very flexible as the items in a list do not need to be of the same type. Lists in Python can be created by just placing the sequence inside the square brackets [].

2. Tuple is also an ordered collection of Python objects. The only difference between a tuple and a list is that tuples are immutable i.e., tuples cannot be modified after it is created. It is represented by a tuple class.

3. Boolean Data type with one of the two built-in values, True or False. Boolean objects that are equal to True are (true), and those equal to False are (false).

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

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result. The evaluation of an expression produces a value, which is why expressions can appear on the right-hand side of assignment statements. A value all by itself is a simple expression, and so is a variable. Evaluating a variable gives the value that the variable refers to.

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

Expressions can be assigned or used as operands, while statements can only be declared. Statements create side effects to be useful, while expressions are values or execute to values.

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

bacon = 22

bacon + 1

The bacon + 1 expression does not reassign the value in bacon that would need an assignment statement: bacon = bacon + 1.

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

'spam' + 'spamspam' = ‘spamspamspam'

'spam' \* 3 = ‘spamspamspam'

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

Variables cannot begin with numbers.

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.'

The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings with the + operator.

To fix it 99 should be quoted. 'I have eaten ' + ‘99’ + ' burritos.'