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', -87.8, 6 are values

\*, -, /, + are expressions

2. What is the difference between string and variable?

A string is a set of characters that are enclosed within “”.

A variable is a character that we can use to store data. We can say that a variable is a memory location where data is stored

eg.: x = “Example”

here variable x stores string “Example”

3. Describe three different data types.

a] Numeric Types

int - Integer value can be any length such as integers 10, 2, 29, -20, -150 etc.

Float - Float is used to store floating-point numbers like 1.9, 9.902, 15.2, etc.

complex - A complex number contains an ordered pair, i.e., x + iy where x and y denote the real and imaginary parts, respectively. The complex numbers like 2.14j, 2.0 + 2.3j, etc.

b] String:

The string can be defined as the sequence of characters represented in the quotation marks.

c] Sequence:

List- The list can contain data of different types. The items stored in the list are separated with a comma (,) and enclosed within square brackets [].

Tuple- Like lists, tuples also contain the collection of the items of different data types. The items of the tuple are separated with a comma (,) and enclosed in parentheses (). A tuple is a read-only data structure as we can't modify the size and value of the items of a tuple.

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

An expression is a combination of operators and operands that is interpreted to produce some other value. An expression is a combination of values, variables, operators, and calls to functions. If you type an expression at the Python prompt, the interpreter evaluates it and displays the result, which is always a value.

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

Expression is made up of values, containers, and mathematical operators (operands) and the statement is just like a command that a python interpreter executes like print.

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

1. spamspamspam
2. spamspamspam

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

A variable name cannot start with a number

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

The int() , float() , and str( ) functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.

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

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

99 is an integer but not a string. So this expression can cause an error.

if we convert 99 into string using str(99) function we will not get an error.