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.

Answer:-

\* - Expression

'hello' - Value

-87.8 - Value

- ~ Expression

/ - Expression

* - Expression

6 - Value

2. What is the difference between string and variable?

Answer:- String is an immutable data type represented by quotation marks and variable is a way by which we can store and assign the data.

Example:- name = “random” (name here is a variable and “random” is a string.

3. Describe three different data types.

Answer:- 1. String :- String is a data type represented by quotation marks and it’s an immutable data type.

Exa:- “random123”

2. Float:- Float data type is a number with decimal.

Exa:- 12.02

3:- Integer:- Integer data type is a whole number without decimal.

Exa:- 34

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

Answer:- Expression is consist of variables, values and mathematical operators.

All expressions are the mathematical operators used to perform various mathematical operations to produce a value.

Exa:- \* - Its an expression used for multiplication in python.

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

Answer:- The main difference between statements and expression is statements are used to control the flow of code execution and performs an action. Exa:- if/else statement, and expressions are the mathematical operators used to produce values by performing mathematical operations.

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

bacon = 22

bacon + 1

Answer:- Variable bacon will still be holding value 22.

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

'spam' + 'spamspam'

'spam' \* 3

Answer :- Values of both terms will be same ‘spamspamspam’

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

Answer:- So in python you can assign a variable under certain rules:-

1. It should not use any python reserved keywords.
2. it should begin with a-z , A-Z or \_.
3. it can be consist of numbers, letters and under score.

So eggs is not a reserved keyword and starting with letters so its valid but on the other hand 100 is starting with a number so its invalid.

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

Answer;- 1. Int() - used to get a value in integer.

2. str() - used to get a value in string.

3. float() - used to get a value in float.

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

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

Answer:- This expression will give an error because concatenation of integer and string data type is not possible in python.

ways of fixing this issue:-

1. 'I have eaten ' + '99' + ' burritos.'- putting 99 inside quotation marks.
2. 'I have eaten ' + str(99 )+ ' burritos.'