Answers written in red colour

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' String (Value)

-87.8 Integer (Value)

- Expression(subtraction)

/ Expression (Division)

* Expression (Addition)

6 Integer (value)

2. What is the difference between string and variable?

Variable = memory location where we can store values eg a=5 where a is the variable assigned value 5.

String = data type, combination of characters

String is closed by single or double quotes eg ‘python’ or “python”

3. Describe three different data types.

a) List = contains series of data in multiple combinations of integers, strings, complex number, Boolean value, float etc

denoted by [] separated by ,

eg list=[1,2,”students”,5+6j, False, 25.65]

b) Tuple = Storing of data set which is immutable

denoted by () separated by ,

eg numbers=(2,56,87,45,99)

c) Set = unordered collection of unique items which are not repeated.

Denoted by {} separated by ,

Eg my\_set={52,65,”set”,”unordered”,52.5}

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

An expression is made up of built in operations

They perform mathematical operations.

Eg a= 5

b=6

print(a+b) here a,b are operands and + “addition” is the operation

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

Assignment statements : spam = 10 is the instruction exceuted by python.

Where spam is given the value of 10.

Expression :Combination of Variable,value,built in functions,operations to produce an outcome.

Eg a=2

b=3 so a\*\*b=8

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

bacon = 22

bacon + 1

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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?

Varaible starts with alphabets and underscore ”\_”

It never starts with numbers or special characters

Hence 100 is invalid

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

Integer : int()

Floating point number : float()  
String : str()

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

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

Here 99 is a string type and not integer

Hence use of quotes is required for 99

Correct Statement : 'I have eaten ' + ’ 99 ’ + ' burritos.'

Output : 'I have eaten 99 burritos.'