**1. In the below elements, which are values or an expression? eg:- values can be integers or strings and expressions will be mathematical operators**.

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**'hello'** is a value of type string

-**87.8** is a value of float

- expression for subtraction

**/ e**xpression for division

**+** expression for addition

**6** is a value of type integer

**2. What is the difference between string and variable?**

variable is store of information

The string is a type of information you would store in a variable

(example:- x = “welcome to India ”)

X is the variable and welcome to India is string

**3. Describe three different data types**.

**Tuple**: These type of data are denoted by “ ( ) ” . Tuples are immutable that is once created they can not be changed(values). Values are stored in it can not be changed or deleted once created.

**List:** Listsare used to store multiple items in the a single variable. List are created using brackets “ [ ] ”

**Dictionary**: Dictionary is also used to store multiple items in a single variable but it stores in the form of key-value pair. Curly brackets are used to denote dictionary “ { } ”

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

Expression is a combination of values, variables, operators, and calls to functions

15 + 1.3

2 \* 3

8 / 2

Expressions give value after computing or being interpreted by Python.

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

Expressions always have values associated with them

The statement is unit of code that performs specific actions

Assignment statements like spam = 10

Conditional statement spam > 0

Looping statement while spam < 10

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

**bacon = 22**

**bacon + 1**

The variable bacon will contain 22 because bacon + 1 is just an expression it is not changing the value that is stored in bacon, if you want to change the value of bacon to 23 then bacon+=1 or bacon = bacon + 1

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

**'spam' + 'spamspam'**

**'spam' \* 3**

First term will give spamspamspam

And second will give second will give spamspamspam

Difference is first term is concatenating the spamspam to spam and second is repeating the spam three times.

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

Python or other programming languages need to follow some rules for storing values in variable, like

Variable name should not start with number in other words variable should start with letter or underscore, there are some exception also like python have some keywords like while, for, if, else, elif we can not give variable names to keywords

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

We can take input by input() function and convert the values after wards with the help of these fn:

**Int()** can convert values into integer, **float()** can convert values into float**, str()** for string

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

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

This will give an error called Type error because concatenation of string and integer is not possible, it can solved by two methods first converting 99 to str and whole code will look like ‘I have eaten’ + str(99) + ‘burritos’ or we can do is “I have eaten”,99,”burritos”