1. What are the differences between operators and values in the following?

\* **Operator – Multiplication**

'hello' **Data Type - string**

-87.8 **Data Type - float**

- **Operator - Substract**

/ **Operator - Divide**

+ **Operator - Add**

6 **Data Type - integer**

2. What is the difference between string and variable?

Spam **variable – it’s an allotted space where we can store some values.**

'spam' **String - it’s a sentence or a word that we can define. It’s immutable.**

3. Describe three different data forms.

**a. Integer: Numeric values (eg: 1, 2, 3, 34, 45345)**

**b. Float: (eg: 1.0, 453.5, 32.458)**

**c. string : ( eg : “Vamsi”, ‘Krishna’)**

**d. Boolean : True or False**

**e. Complex : Numeric value + imaginary (eg : 5 + 3j)**

4. What makes up an expression? What are the functions of all expressions?

**Expression is a combination of variables, operations and values that yields a result value.**

**Eg:**

**a = 3**

**b = 2**

**c = b \* a (# this is an expression .)**

**functions of expressions can be print(), len().**

5. In this chapter, assignment statements such as spam = 10 were added. What's the difference between a declaration and an expression?

**Declaration : we declare the value(any data type) to a variable.**

**Expression : it’s a result out of an expression such as a+b, a-b.**

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

bacon = 22

bacon + 1

**out : 23**

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

'spam' + 'spamspam' **out: ‘spamspamspam’**

'spam' \* 3 **out: ‘spamspamspam’**

8. Why is it that eggs is a true variable name but 100 is not?

**In Python, Variable is assigned with characters , but not with numeric values, as it returns syntax error.**

9. Which of the following three functions may be used to convert a value to an integer, a floating-point number, or a string?

**To convert any data type to integer, we use int(variable). “Variable being any data type”**

**To convert any data type to float, we use float(variable).**

**To convert any data type to string, we use str(variable).**

10. What is the error caused by this expression? What would you do about it?

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

**Error caused : can only concatenate str (not "int") to str**

**Correction : remove apostrophes before and after +99+.**

**‘I have eaten +99+ burritos’**

**Or add “ “ instead of ‘ ‘before and after +99+.**

**‘I have eaten “+99+” burritos’**