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

**\***

**‘hello’**

**-87.8**

**-**

**/**

**+**

**6**

**Ans.**

Operators – these are used to perform operations on values and variables. Ex- \*, -, /, +  
Values- A value may be characters i.e. ‘hello’ or a number like -87.8

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

**spam**

**‘spam’**

**Ans.**

Strings are surrounded by either single quotation marks, or double quotation marks. Ex- ‘spam’, “spam”.   
Variables are used for storing data values. Ex- a = 10 Hera ‘a’ is a variable.

**3. Describe three different data forms.**

**Ans.**

1. Numeric: int, float and complex

int data type represents integers values. Ex- 0, 1, -2 and -15

float data type represents floating point numbers, up to 15 decimal places. Ex- 0.3, -2.8, 5.542315467, etc. but also integers.

complex data type represents imaginary numbers in a complex pair. Ex- (3+2j)

2. Sequence: str, list and tuple

str data types are sequences of characters, represented by either single or double quotes. Ex- “hello”

lists can contain ordered sequences of any data type, even multiple different data types within the same list. They are created by providing the elements of the list between [], e.g. [‘king’, 2, 4.55]

tuple is very similar to lists, the only difference being that it's immutable and it's created using (). This means that once we create a tuple, we can't change the values it contains.

3. Boolean: (True or False)

bool data type is used to represent Boolean values – True(1) or False(0)

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

**Ans.**

Combinations of values and operators which evaluate down to a single value makes an expression.

**5. In this chapter, assignment statements such as spam = 10 were added. What’s the**

**difference between a declaration and an expression?**

**Ans.**

When some value is assigned to variable by using assignment operator “=” it is called as declaration. Expressions are combinations of values, variables, operators and always evaluate down to a single value

**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**

**Ans.**

‘spam’ + ‘spamspam’= ‘spamspamspam’

‘spam’ \* 3= ‘spamspamspam’

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

**Ans.** Variable name can’t start from number

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

**Ans.**

To convert value in integer- int()

To convert value in floating-point number- float()

To convert value in string= str()

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

**‘I have eaten’ + 99 + ‘ burritos.’**

**Ans.**

TypeError

‘I have eaten’ + ‘99’ + ‘ burritos.’