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

**\***

**‘hello’**

**-87.8**

**-**

**/**

**+**

**6**

**Ans:** values are integers(negative and floating),strings(sequence of characters encoded in single quotes) whereas operators are + =>addition, - => subtraction, , / =>float division, \* => multiplication

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

**Spam**

**‘Spam’**

**Ans:** String is a type of information that we would store in a variable(string type) and string is written in single quotes ..’spam’ is a string and spam is a variable (memory location of the value stored in the variable).

A value is assigned to a variable with ‘=’ symbol .example: spam=’spam’.

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

**Ans**: Numerical (ex: int, float, complex), String, structured data or collections (homogeneous/heterogenous data) ex: list, tuple, dictionary, set,

Categorical ->Nominal->Boolean =True/False

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

Ans: An expression is an instruction that combines values and operators and always evaluates down to a single value.

**Functions:** Python evaluates expressions from left to right. Notice that while evaluating an assignment, the right-hand side is evaluated before the left-hand side.

->Returns single value/result

->eval() built-in function toc evaluate the expressions in python

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

**Ans:-** An **expression** evaluates to a value with no storing in the memory whereas assignment statements assigns a value to a variable(memory location of that data).

**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:** ‘spamspamspam’

‘spamspamspam’

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

Ans: according to the naming conventions in python, variable name should not be started with number

And variable should start with alphabet or ‘\_’ symbol and follows any count of alphanumerics and symbol ‘\_’

**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:** int() =>function converts a numerical string/floating numbers into integers

float()=>function converts integers / floating strings into float

str() => function converts integers /floats into string

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

**‘I have eaten’ + 99 + ‘burritos.’**

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

Here 99 is int cannot be concatenated to strings.