**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' : value(string)

-87.8 : value

- : expression

/ : expression

+ : expression

6 : value

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

A string is a collection of letter and different types of characters which are enclosed in “”. For Ex: “This is a string”

A variable is a specific space in the memory of the computer that is used to store information. A variable can be of different types and can be used to store a string. For ex : var = “This is a string” , here var is a variable

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

i. Integer : refers to integers like -1, 2, 4, 34

ii. Floats : refers to real numbers that can be written using decimal point like : 3.14 , 2.71 , 5.00

iii. String : refers to a sequence of characters like “Hello World”

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

Expression consist of different types of values along with a mathematical operator which refers to a certain idea that must be evaluated. The purpose of expressions is to do a mathematical operation or to check whether an operation should be done of not.

For example:

(a) x = x+1

(b) if x > 10 :

x=x-1

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

Ans : An expression is used to evaluate some kind of a value. For example x= x+1 will evaluate a new number after the number x is given.

Statements like spam =10 do not evaluate any value and in this case the statement assigns the value 10 to the variable spam.

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

**bacon = 22**

**bacon + 1**

Ans : The variable contains the value 23

**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 eggs a valid variable name while 100 is invalid?**

Ans : eggs can be a variable name as it is a word and follows all rules of naming an identifier whereas 100 does not follow the rule of the identifier not starting with a number and is thus an invalid variable name.

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

Ans : integer : int()

Float : float()

String : str()

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

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

Ans : A string cannot be added to a number(integer in this case) and thus we have the error.

To fix the error we must use a string in place of the number and thus we should be having:

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