**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.**

**Answer:**  
\* : Expression

'hello' : Value

-87.8 : Value

- : Expression

/ : Expression

* : Expression

6 : Value

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

**Answer:**A variable is a name that refers to any value whereas a string represents a text  
ex:  
x=’This is my 1st assignment’  
here x is a variable and  
‘This is my 1st assignment’ is a string

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

**Answer:**a. Number : This consists of integers, floating or complex numbers  
 Ex: 2,-3,2.5  
b. String : This consists of data written in ‘str’ format and within the quotes  
 Ex: “Hello”, “assignment”  
c. List: The data which is given under listing format and within square brackets  
 Ex: [2,3,4,5,6,7]

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

**Answer:**An expression is made up of variables, values, operators and different methods. It is like an input given to the compiler, which interprets it and displays the output.   
  
Expression is a representation of any value. It can be a string, value etc.

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

**Answer:** In spam=10, the ‘10’ represents an expression. As an expression is a combination of values, variables, operators and functions.

whereas, ‘spam=10’ represents a statement. A statement is a complete instruction or command that performs an action.

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

bacon = 22

bacon + 1

**Answer:** 23

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

'spam' + 'spamspam'

'spam' \* 3

**Answer:** The 1st code shows an example of concatenation, it combines the string ‘spam’ with other string ‘spamspam’ to produce a 3rd string ‘spamspamspam’

Whereas, the 2nd code shows string repetition, where the string ‘spam’ will get repeated 3 times and the output will show ‘spamspamspam’

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

**Answer:** As per the rules for naming a variable in python, a variable should start with a letter or an underscore and cannot start with a number and after the 1st character, the variable can have letter or a number.  
So, ‘eggs’ is considered as valid as it only has letters whereas ‘100’ is invalid as it has only numbers.

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

**Answer:** int(), float(), str()  
a=23.5  
int(a) = 23  
float (a) = 23.5  
str(a) = ‘23.5’

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

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

**Answer:** This above code shows error as we are trying to concatenate string with an integer.  
The ‘I have eaten ' and ' burritos.' are string whereas 99 is an integer.  
To solve this we can convert the type of 99 to string and then concatenate it.

'I have eaten ' + ‘99’ + ' burritos.'  
shows the output as 'I have eaten 99 burritos.'