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.

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'hello' - Value (String)

-87.8 - Value (Int)

- - Expression

/ - Expression

* - Expression

6 -Value

2. What is the difference between string and variable?

Ans. In **python Strings are stored inside Single quote (‘) or Double Quote(“) eg:- “abcd” or ‘123’.** String is one of the data type in python.  
 **on the other hand, Variables are like container which store the data**. or different type of data. to use a variable we have to define a variable for example.

x = 5

y = “abc”

z = True

in above example there are 3 variables which store different data types. x variable store a integer, y string and z boolean.

3. Describe three different data types.

Ans. 3 most common data types are

1. **String(str)** :- strings are array of characters. anythin written inside Single quote (‘) or Double Quote(“) is a string.
2. **Integer(int)** :- Any number which is not in decimal is a Integer. to define a number we have to write a number without quotes. if number has decimal value it will be considered as different data type called float.
3. **boolean(bool)** :- Boolean are True and False value it contains only 2 values True or False.

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

Ans. expression is kind of combination of operators which is likly to produce some other value.  
here is list what expression do : -

* x = product
* + = adds
* - = subtract
* / = divide
* == = equals
* != = Not equal

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

Ans. Expression can produce an another value but Statements can do something or tell us something. all the expression are part of statement.

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' = spamspamspam

'spam' \* 3 = spamspamspam

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

Ans. in python we can name variable by number. Also a variable name can be start with number, but it can end with number. For example :-

1eggs = 3 (invalid)

eggs1 = 3 (valid)

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

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

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

Ans. in this expression we are adding Strings with Numbers. if we add numbers with string it raise a TypeError. Only Same type of data types can be added together.

Fix :- 99 should be in quotes. or just change number type to str rectified expression will look like   
option 1 : - 'I have eaten ' + ‘99’ + ' burritos.'

option 2 :- 'I have eaten ' + str(99) + ' burritos.'