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.

\*

'hello'

-87.8

-

/

6   
Sol 1.   
Values : ‘hello’ , -87.8, 6   
Expression : \*, -, /, +

2. What is the difference between string and variable?

Sol 2. A variable is basically the name of the location in the primary memory of your computer. This can be chosen by you. A variable can store everything from strings to numbers. A string is the values inside the quotes assigned to a string.

3. Describe three different data types.

Sol 3. A data type, in programming, is a classification that specifies which type of value a variable has and what type of mathematical, relational or logical operations can be applied

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

Sol 4. An expression is a combination of operators and operands that is interpreted to produce some other value. In any programming language, an expression is evaluated as per the precedence of its operators

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

Sol 5. In programming language terminology, an “expression” is a combination of values and functions that are combined and interpreted by the compiler to create a new value, as opposed to a “statement” which is just a standalone unit of execution and doesn't return anything.

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

bacon = 22

bacon + 1

Sol 6. bacon = 22

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

'spam' + 'spamspam'

'spam' \* 3  
  
Sol 7. ‘spamspamspam'  
 ‘spamspamspam'

8. Why is eggs a valid variable name while 100 is invalid?  
Sol 8. Because 100 is an Integer value where as eggs is string

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

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

'I have eaten ' + 99 + ' burritos.'  
  
Sol 10. The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings.