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.

\*

Ans. Expression

'hello'

Ans. Value

-87.8

Ans. Value

-

Ans. Expression

/

Ans. Expression

Ans. Expression

6

Ans. Value

2. What is the difference between string and variable?

Ans.   
String – String is type of value which is nothing but combination of character. Strings are always enclosed in single quotes or double quotes.

Variable – Variable are used to store the different types of values like strings, integers, lists which can be changed. Variables are helpful in programs to reuse the value.

3. Describe three different data types.

Ans. Following are three data types

1. Integers Example. 2,5,9,11
2. Floating-point numbers Example. 2.67, 3.1,1.5
3. String Example. “ram”, “today is Monday”, “56”

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

Ans. Expression is made up of operators and values. Expressions are used to produce some value.

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

+Ans.   
Expression always gives us value which is made of operators and values.   
Example. b=a+3

Statement is an instruction given to execute which may or may not produce value.  
Example. b=a+3  
x=7  
print(x)

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

bacon = 22

bacon + 1

Ans. 23

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

'spam' + 'spamspam'

Ans. ‘spamspamspam’

'spam' \* 3

Ans. ‘spamspamspam’

8. Why is eggs a valid variable name while 100 is invalid?  
Ans. 100 is invalid variable as variable names cannot start with a number

9. What three functions can be used to get the integer, floating-point number, or string version of a value?  
Ans. int(), float(), str() these 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. Only strings can be combined together but in above expression 99 is not a string which is reason for the error. To rectify the error, we need to be converted it in a string. Right expression after correction will be  
'I have eaten ' + ‘99’ + ' burritos.'