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.

\* = operator

'hello' = value

-87.8 = value

- = operator

/ = operator

* = operator

6 = value

2. What is the difference between string and variable?

|  |  |
| --- | --- |
| String | Variable |
| String is set of characters | Variable is one element |
| Example :- 'RAM' = string | Example :- RAM = variable |
|  |  |

3. Describe three different data types.

|  |  |  |
| --- | --- | --- |
| Function | Description | Example |
| int() | It converts the value into an int. String with only digits can be converted. | >>>a = int (3.7)  >>>a  3 |
| float() | It converts the value into float. String with only digits can be converted. | >>>a = float (4)  >>>a  4.0 |
| str() | It converts an object into string. | >>>str (2.1)  '2.1' |

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

= An expression is a group of operators and operands that when combined, interpret one value to produce another.

= The precedence of an expression's operators determines how it is evaluated.

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

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

bacon = 22

bacon + 1

bacon = 22  
print(bacon + 1)

= 23

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

'spam' + 'spamspam' = spamspamspam

'spam' \* 3 =  
spam  
spam  
spam

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

= Because 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?

1) str()  
2) int()  
3) float()

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

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

= TypeError: can only concatenate str (not "int") to str

This expression causes and error because in this line 'I have eaten' and 'burritos' are strings, while 99 is treated as integer. In order to fix the error and print

'I have eaten 99 burritos.' around it to treat it as a string.