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.

\* expression

'hello' value

-87.8 value

- expression

/ expression

* expression

6 value

2. What is the difference between string and variable?

String is an Immutable array of characters

Variable is something which stores data in it and could be referenced later using the variable name

3. Describe three different data types.

Data types:

* int
* str
* float
* bool
* complex

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

expression is made up of statements including operators and values. Typically expressions evaluate to a value

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

statement represents an action or a command like print, assignment statements

expression is a combination of variables, operators, values that evaluate to a value

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

bacon = 22

bacon + 1

bacon will contain 23

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

'spam' + 'spamspam' # This results in spamspamspam

'spam' \* 3 # This results in spamspamspam

Both the above expressions will evaluate to spamspamspam

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

variables can only start with alphabets, underscore(\_)

100 is invalid variable name as it starts with number

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

(int) – will cast the value to integer

(float) – will cast the value to float

(str) – will cast the value to string

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

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

+ operator can concatenate str with str and not int. The above could be fixed by converting 99 to str using type casting function like below:

'I have eaten ' + str(99) + ' burritos.'