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.

\* = Arithmatic Operator

'hello' = String Value

-87.8 = Floating-point Value

- = Arithmatic Operator

/ = Arithmatic Operator

+ = Arithmatic Operator

6 = Integer

2. What is the difference between string and variable?

**String**: string means collection of character, string in python are sequences of character data. They are created by enclosing character in quotes.

**Variable**: Variables in python a variable is a normal used to store date in memory.

Or

A string could be a variable. A variable is anything that can be represented in a programming language that one can assign different values to\*. So a variable could hold a number, an array, a set, a string or even a function.

A string is a list of characters, often represented as an array, e.g. “The quick brown fox. 1234!@#$%^&\*’()\_+”

3. Describe three different data types.

**Integer (int):** Numeric data type for numbers without fractions

Examples; -707, 0, 707

**Float:** Numeric data type for numbers with fractions

Example: 707.07, 0.7, 707.00

**String**: Sequence of characters, digits, or symbols—always treated as text

**Example**: hello, +1-999-666-3333

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

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result.

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

Expressions are unique in meaning, while statements are two-sided in execution. For example, 1 has a certain value while go( ) may be executed or not. Statements are the whole structure, while expressions are the building blocks. For example, a line or a block of code is a statement

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

bacon = 22

bacon + 1

A)The bacon variable is set to 20. The bacon + 1 expression does not reassign the value in bacon (that would need an assignment statement: bacon = bacon + 1)

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

'spam' + 'spamspam'

'spam' \* 3

A) Both expressions evaluate to the string 'spamspamspam'

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

A) Variable names cannot begin with a number.

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

A) The int(), float(), and str() functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.

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

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