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?

Variables are nothing but reserved memory locations to store values.

This means that when we create a variable, we reserve some space in memory. Based on the data type of variables, the interpreter allocates memory and decides what can be stored in the reserved memory. Therefore, by assigning different data types to variables. The classification or categorization of data items such as Boolean, integer, string, void, character etc. Is called its data types. Hence, “String” is a datatype, whose value can be stored in a variable to reserve some space in the memory.

3. Describe three different data types.

A string is a sequence of characters and can contain letters, numbers, symbols and even spaces. It must be enclosed in quotation marks for it to be recognized as a string. It is Alphanumeric characters, example hello Friends, Paul

And Integers are numbers without a fractional component, and don't support decimal points or we say integers are whole numbers. For example 3, 8, 12 are integer ( int ), and 4.5 as a float ( float ).

While Float is a function or reusable code in the Python programming language that converts values into floating point numbers. Floating point numbers are decimal values or fractional numbers like 133.5, 2897.11, and 3571.213, whereas real numbers like 56, 2, and 33 are called integers.

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 value the expression and displays the result. For example: Print(43+11) # this will print 54

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

A statement is an instruction that the Python interpreter can execute. “spam=10” is an example of assignment statement. Some other kinds of statements are while statements, for statements, if statements, and import statements etc. An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated

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

bacon = 22

bacon + 1

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

spam' + 'spamspam’: spamspamspam

'spam' \* 3: spamspamspam

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

str()  
int()  
float()

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

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

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.', 99 needs '' around it to treat it as a string.