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' : values

-87.8 : values

- : expression

/ : expression

* : expression

6 : values

2. What is the difference between string and variable?

String is a data type and variable is used to store and manage data that holds a value.

If we create the variable and store the value that value have a data type. It includes all data types int, string etc.

3. Describe three different data types.

Int – integer data type represents whole numbers without any decimal part

for instance – int values are 5, 10, -6, 0  
  
String- String data type is representing a sequence of characters. It enclosed in quotation marks example of string : “Assignment-1”, ‘Hello’, ‘’’ hi team,  
My name is Sonu’’’

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

Expression is made up of by combination of operators, variable, identifier or simple valid combination of operators and operands that interpreted to produce another value in python. An expression is evaluated as per the precedence of its operators. So that if there is more than one operator in an expression, their precedence decides which operation will be performed first.

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

In this assignment statement spam = 10, the left-hand side spam is a variable, and the right-hand side value 10 is an expression that evaluates to the value 10.

The statement assigns the value of 10 to the variable spam, modifying its state in the program.

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'

'spam' \* 3

Ans : Same its ‘spamspamspam’

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

1. Syntax: Identifiers can be a combination of letters in lowercase (a to z) or uppercase (A to Z) or digits (0 to 9) or an underscore (\_).
2. No digits**:** They must start with a letter or the underscore character, but not with a digit.

Keeping this in mind eggs is a valid variable which starts with letter and 100 is invalid which starts with digit.

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

int() for integer

float() for floating point number

str() for string

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

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

Because 99 is int and other both is string. String can only concatenate str (not "int") to str.   
  
To solve this we need to convert 99 in string by  
  
'I have eaten ' + str(99) + ' burritos.'

Output : I have eaten 99 burritos.