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 a datatype which can include alphanumerical values whereas Variable is an identifier which can be used to store values of any datatype

3. Describe three different data types.

Numeric - It consist of numerical data like integers and floating point numbers

String- It is a collection of one more characters

Boolean - It consist of either True or False value only

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

An expression is a combination of operators and operands that is interpreted to produce some other value. In a programming language, an expression is evaluated as per the precedence of its operators and performs the specified task.

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

Here '=' is an expression which is used to assign some value to a variable whereas 'spam=10' as a whole is a statement which indicates that variable named 'spam' has been assigned value as 10.

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

bacon = 22

bacon + 1

23

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?

In Python variable name can only start with a letter or underscore and not integer. Here in 100 it starts with 1 which is an integer hence it cannot be used as a variable name

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

int(val)

float(val)

str(val)

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

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

Because, + operator when used with strings is used for concatenation and when used with integer or float it is used for addition. But here combination of string and integer is used and integer cannot be added or concatenated to string hence error is shown