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.

Ans:

\* is an asterisk

'hello' is a string

-87.8 is a negative float

- is a subtraction operator

/ is a division operator

* is a decimal point

6 is an integer

2. What is the difference between string and variable?

Ans:In programming, a variable is a store of information that can be changed during the execution of a program. A string is a type of information you would store in a variable.

3. Describe three different data types.

Ans:In programming, there are various types of data including integer, real, character or string, and Boolean. Integer data types often represent whole numbers in programming. A character is a data type that represents a single character or symbol. A string is a sequence of characters. Boolean data types represent true or false values.

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

Ans:In programming, an expression is made up of one or more values, variables, operators, and function calls that evaluate to a value. All expressions do something. They evaluate to a value. The value can be a number, a string, or another type of data.

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

Ans:In programming, an expression is a combination of values, variables, operators, and function calls that evaluate to a value. A statement is an instruction that the Python interpreter can execute. An expression is a statement that evaluates to a value. An assignment statement like spam = 10 is a statement that assigns the value 10 to the variable spam.

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

bacon = 22

bacon + 1

Ans:After running the code, the variable bacon contains 22. The expression bacon + 1 evaluates to 23, but the value is not assigned to bacon. So bacon still contains 22.

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

'spam' + 'spamspam'

'spam' \* 3

Ans:The values of the following two terms are the same. They both evaluate to ‘spamspamspam’.

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

Ans:In Python, variable names cannot begin with a number. That’s why 100 is an invalid variable name. However, eggs is a valid variable name because it starts with a letter. Variable names can contain letters (uppercase and lowercase), numbers, and underscores. They cannot contain spaces or special characters.

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

Ans:

int() function returns the integer version of a value.

float() function returns the floating-point number version of a value.

str() function returns the string version of a value.

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

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

Ans:The expression ‘I have eaten ’ + 99 + ’ burritos.’ causes an error because it tries to concatenate a string with an integer. To fix this error, you can convert the integer to a string using the str() function

Here I can fix it: 'I have eaten '+ str(99) + ' burritos'.