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.

\*

'hello'

-87.8

-

/

6

Values: ‘hello’ , -87.8 , 6

Operators: \* - / +

2. What is the difference between string and variable?

A string is the datatype of a value which could be stored inside a variable.

A variable is an identifier for the value stored in it.

For eg: name= “abcd”

Here year is the variable and “abcd” is the string value.

3. Describe three different data types.

String : A string is a sequence of characters enclosed in quotations.

Int : int is the datatype which can have any integer value.

float : float is the datatype which can have any decimal point numbers.

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

An expression is a combination of operators and operands which evaluates to something. operands can be values or variables, and operators can be arithmetic, logical etc.

An expression always evaluates to something.

eg: x=10+20

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

An expression does some evaluation to provide certain result.

A statement is used for printing values, creating variables etc.

spam=10 is both an assignment and a statement.

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

bacon = 22

bacon + 1

bacon will contain 22.

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

'spam' + 'spamspam'

'spam' \* 3

spamspamspam

spamspamspam

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

A variable should always start with an alphabet or underscore.

Since eggs contain only alphabets , it is a valid variable. But since 100 doesn’t start with an alphabet it is invalid.

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

Typecasting using int() , float() , str() can be used.

X=10

Integer : int(X)

Floating point number : float(X)

String version : str(X)

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

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

It raises an error because 99 is of integer datatype and others are of string.

It can be fixed by:

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