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

Ans.: \*, -, /, + are operators and hence expression(or part of expression),

‘hello’, -87.8, 6 are string, float and integers and hence values

2. What is the difference between string and variable?

Ans.: Strings are values that are of the format “abc123ABC123” while variables are memory references to the values where they are stored physically in memory, also a variable can be either integer, boolean, decimal or string but a string will always be a value.

3. Describe three different data types.

Ans.:Three different data types are:

a. Integer data type, eg: 6

b. Boolean data type, eg: true, false

c. String data type, eg: “Hello World !”

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

Ans.: Expressions are made up of operators and values(or operands), All expressions return a value after evaluating them

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

Ans.: Expression here is spam = 10, we have assigned a value 10 to variable spam, Assignment statement is ‘=’ that is used to assign the values, An expression is a sequence of operators and values that produce/return a value and statements are instructions or code that python interpreter can execute

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.:’spam’ + ‘spamspam’ returns ‘spamspamspam’

‘spam’ \* 3 returns ‘spamspamspam’

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

Ans.:Variable name have a particular syntax for assignment

eggs is valid because variable name start from either a character or \_

but 100 is invalid because it starts from a number, the compiler cannot recognize it as a variable and gives an error

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

Ans.:int() function can be used to convert into integer, float() to get a floating point value and str() to get a string value

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

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

Ans.:This expression causes an error because we are trying to add a integer to a string which cannot be evaluated unless we convert the integer to a string

This can be fixed by

‘I have eaten’ + ‘ 99’ + ‘ burritos’