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 :**  Values : ‘hello’, 6

Expression : \*, -, /, +, -87.8

1. What is the difference between string and variable?

**Ans :** Variables are the names or the symbols that we use to store the data while programming but, strigs are data or value that are used to fill up a variable.

1. Describe three different data types.

**Ans :** The different datatypes in python are :

1.Numeric - integer (int), float, complex

2.boolean(bool)

3.string(str)

4.list

5.tuple

6.set

7.dictionary

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

**Ans:** An expression is a combination of operators and operands. The expressions are evaluated to produce the results or some other value that can be stored in the variables.

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

**Ans :** An expression is combination of operator and operands. It evaluates to produce the values. For the given assignment statement the expression is = 10 i.e., we are assigning the value 10 to the variable spam.

The statement is the command that we print or return like

Print spam=10.

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

bacon = 22

bacon + 1

**Ans :** 22

Initially we are assigning 22 to bacon. So bacon having 22 in it. adding one to bacon

Gives 23 but we didn’t assigned the result to bacon. So, the bacon contains 22 only.

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

'spam' + 'spamspam'

'spam' \* 3

**Ans :** ‘spam’+’spamspam’ will be ‘spamspamspam’(concatenates)

'spam' \* 3 will be ‘spamspamspam’(multiple)

8\*-/\*

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

**Ans :** A variuable is a name or symbol that stores the data. The variable name must starts with a letter or the underscore but, cannot start with a number. So, eggs is a valid variable name while 100 is invalid.

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

**Ans :** int() for integer values

Float() for floating-point values and

Str() for string values+.

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

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

**Ans :** The above expression shows that we are trying to concatenate. But the concatenation done iff all the operands are of the same datatype.+

In this expression ‘I have eaten’ and ‘burriots’ re strings while 99 is integer. So, it will occurs an error. To fix this error we have to write

'I have eaten ' + ‘99’ + ' burritos.'

The output will be ‘I have eaten 99 burritos.’