**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 are - 'hello', -87.8, 6

expressions are- \*, -, /, +

**2.** What is the difference between string and variable?

**Ans-**

**String:-**

String is set of unicode characters, it can be of single character or multiple characters denoted in single or double quotes.

Strings can be combination of both characters as well variable if we denote in quotes.

**Variable-**

Variable is assigning object to a variable, So when calling it next time we can call it by variable rather calling original object.

**3.** Describe three different data types.

Data types:-

**1.Numbers-**

Python numbers consist of complex numbers, floating point numbers and integers.

Complex numbers are defined as complex class e.g. 6+7j

here 6 is real part and 7 is imaginary part.

Floating point numbers are defined as float (it can be any numbers having float eg.5.618)

Integers defined as Int in python and it can be of any number excluding floating point numbers.There is no maximum limit on integers.

**2.List-**

List is an ordered sequence of items. There is no need for the value in the list to be the same data types.

List datatype is the most exclusive datatype in python for containing versatile data.

A list can look lie this.

>>>b=[8,5.7,’name’]

**3.Tuple-**

A tuple is a sequence of items that are in order and it is not possible to modify tuples.

The primary of tuples is to write-protect data. Difference between tuple and list are that tuple is immutable.

Tuples can be represented by using parentheses (), and commas used to separate items.

Tuples can look like below.

>>> t=(5,’i am in tuple’, 8.5)

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

**Ans-**

An expression is a combination of values, variables, operators and call to functions.

Expressions are representation of value for example any string is also an expressions since it represents the value of string as well.

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

**Ans-**

Statement are used to compute or write a value, or to call procedure (returns none other than values)

like in example spam=10 , will return 10 value when called spam and in the case of expressions we are not performing any of the operation in case of spam=10, it has just value assigned to it. Expressions can be of below example if we define spam=10, spam+’abc’+50 called an expression.

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

bacon = 22

bacon + 1

**Ans-**

bacon will have 22, Since we are not saving result here.

**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?

**Ans-**

variables are always store in alphanumeric values, Here 100 is integer which can not represent as variable other than being a value.

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

**Ans-**

The int(), float(), and str() functions used to get value of integer, floating-point and string version.

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

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

**Ans-** Given example consist of multiple strings and integer values which is not right way to represent in python and will always give error, it can be written in below way by converting 99 into string.

1.>>>'I have eaten ' + ‘99’ + ' burritos.'

2.>>>'I have eaten ' + str(99) + ' burritos.'