1. What exactly is []?

Ans:

[] is an empty list in python

2. In a list of values stored in a variable called spam, how would you assign the value 'hello' as the third value? (Assume [2, 4, 6, 8, 10] are in spam.)

Ans:

We can add the value “hello” as a third value in list spam using insert() function

spam.insert(2, “hello”)

Let's pretend the spam includes the list ['a', 'b', 'c', 'd'] for the next three queries.

3. What is the value of spam[int(int('3' \* 2) / 11)]?

Ans:

First we need to evaluate the expression used for slicing.

‘3’\*2 will produce “33”. Converting “33” will produce 33.

33/11 will produce 3.0. Integer value of 3.0 is 3. So, now the expression value is 3.

spam[3] is ‘d’. So, the answer is ‘d’

4. What is the value of spam[-1]?

Ans:

‘d’ (because we are accessing the 1st element from last)

5. What is the value of spam[:2]?

Ans:

[‘a’,’b’]

Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.

6. What is the value of bacon.index('cat')?

Ans:

1 (because index() function will return the index of first occurrence of the element searched)

7. How does bacon.append(99) change the look of the list value in bacon?

Ans:

Bacon.append(99) will add the value 99 to the end of the list.

After performing this operation, the list bacon will be [3.14, ‘cat’, 11, ‘cat’, True, 99]

8. How does bacon.remove('cat') change the look of the list in bacon?

Ans:

bacon.remove('cat') will remove the 1st occurrence of element ‘cat’ from the list bacon. After performing this operation, the bacon list will be [3.14, 11, ‘cat’, True, 99]

9. What are the list concatenation and list replication operators?

Ans:

List concatenation operator is +, and replication operator is \*

10. What is difference between the list methods append() and insert()?

Ans:

append() method always will add an element to a list at the end.

insert() method will be used to add an element at a specified position in the list.

11. What are the two methods for removing items from a list?

Ans:

1. remove(element)
2. pop(index)

12. Describe how list values and string values are identical.

Ans:

Lists and strings are sequence types.

13. What's the difference between tuples and lists?

Ans:

Both lists and tuples are sequence data types which are used to store values of different data types.

Lists can be mutable. Tuples can’t be mutable

14. How do you type a tuple value that only contains the integer 42?

Ans:

t = (42,)

15. How do you get a list value's tuple form? How do you get a tuple value's list form?

Ans:

We will get a list value’s tuple form by converting the list into tuple

Example:

List = [1,2,3,4]

T = tuple(List)

We will get a tuple value’s list form by converting the tuple into list

Example:

T = (1,2,3,4)

List = list(T)

16. Variables that "contain" list values are not necessarily lists themselves. Instead, what do they contain?

Ans:

Variables that "contain" list values are not necessarily lists themselves. Instead they contain references to the list values.

17. How do you distinguish between copy.copy() and copy.deepcopy()?

Ans:

copy() will create a reference to the original object. If we change the copy object, the original object will also get changed.

deepcopy() will create a new object by copying all the original data. In this case, changing copied object will not change the original object.