1. What exactly is []?

This is called empty list value, which has no items.

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.)

spam[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)]?

'd'

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

'd'

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

['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')?

ANSWER: 1

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

ANSWER: [3.14, 'cat', 11, 'cat', True, 99]

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

ANSWER:

[3.14, 11, 'cat', True]

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

ANSWER: For concatenation we use ‘+’ operator and for replication ‘\*’ is used.

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

ANSWER: append() add the values at the last of a list, insert() can insert values at any index in the list as per our choice.

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

ANSWER: The remove() list and del statement are used to remove values from a list.

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

ANSWER: Both can be used in for loop.

Both could be used with in and not in operators.

On both len(), slices and index operations can be performed.

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

ANSWER: Tuples are immutable; the values cannot be manipulated but lists are mutable means values can be added or changed.

Tuples are written in parentheses like( 1,2,3,4,5) but lists are written in square brackets like

[ 1,2,3,4,5].

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

ANSWER: (42,)

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

ANSWER: By using tuple() and list() functions.

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

ANSWER: Variables that "contain" list values are not necessarily lists themselves instead they contain references to list values.

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

ANSWER:

copy.copy() can be used to make a duplicate copy of a mutable value like a list or dictionary and make a separate list or dictionary with two different reference but If the list contains lists and we want to copy that list then we use the copy.deepcopy() function instead of copy.copy() because it copy these inner lists as well.