1. What exactly is []?

[] is an empty list which does not have any values in it.

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 = [2,4,6,8,10]

spam[3] = '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)]?

the value of spam[int(int('3' \* 2) / 11)] is ‘d’.

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

The value of spam[-1] is ‘d’.

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

The value of spam[:2] is ['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')?

The value of bacon.index('cat') is 1.

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

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

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

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

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

The operator for list concatenation is +, while the operator for replication is \*.

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

List method append() - one can able to add value only at end whereas with list method insert() - one can add value anywhere in the list.

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

Remove() list and del statement are the two methods for removing items from the list.

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

Both lists and strings can be passed to len(), have indexes and slices, be used in for loops, be concatenated or replicated, and be used with the in and not in operators.

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

Tuples are immutable, which means you can not manipulate the values in it and they are written as () parenthesis while lists are mutable, which means you can manipulate the values in it and can be written as [] square brackets.

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

t = (42,) comma is necessary.

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

The tuple() and list() functions, respectively.

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

Python uses references to list the values.

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

The copy.copy() function will do a shallow copy of a list, while the copy.deepcopy() function will do a deep copy of a list. That is, only copy.deepcopy() will duplicate any lists inside the list.