1. What exactly is []?

**Solution:** empty list which means list that has no items 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.)

**Solution:** 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)]?

**Solution:** d

**Explanation:** ‘3’\*2 🡪 ‘33’ 🡪 int(‘33’)/11 🡪 3.0 🡪int(3.0) 🡪 3 , so spam[3] = d

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

**Solution:** d

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

**Solution:** [‘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')?

**Solution:** 1

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

**Solution:** [3.14, 'cat,' 11, 'cat,' True, 99]

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

**Solution:** [3.14, 11, 'cat,' True]

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

**Solution:** Concatenation : +, Replication : \*

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

**Solution:** append() method appends in the end of list whereas in insert we can provide value with index on which we want to insert the value.

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

**Solution:** del and remove()

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

**Solution:** 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?

**Solution:** Lists are mutable whereas tuples are immutable.

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

**Solution:** (42,)

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

**Solution:** tuple() and list() respectively.

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

**Solution:** They contain references to list values.

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

**Solution:** copy() create reference to original object. If you change copied object - you change the original object. . deepcopy() creates new object and does real copying of original object to new one. Changing new deepcopied object doesn't affect original object.