1. What exactly is []?

[] is an empty list

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.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)]?

‘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')?

1

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

99 will be added at the end of the list

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

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

the remove() method removes the first matching element, so the beacon list will become like this:

[3.14, 11, 'cat', True]

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

concatenation (+) and replication (\*)

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

the append() method adds an item to the end of the list.

the insert() method inserts an element to the list at the specified index.

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

pop() and remove()

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

the similarity between lists and strings is that both are sequences. 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?

lists are mutable, they can have values added, removed, or changed. tuples are immutable; they cannot be changed at all. also, tuples are written using parentheses ( and ), while lists use the square brackets [ and ].

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

(42,) the trailing comma is mandatory

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

to get a list value use list()

to get a tuple value use tuple()

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

they contain references to list 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. copy.deepcopy() constructs a new compound object and then, recursively, inserts copies into it of the objects found in the original.