

1. What exactly is []?

Ans: It 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.)

Ans: spam[2]='hello'

```
In [3]: 1 spam=[2,4,6,8,10]
        2 spam[2]='hello'
        3 spam
Out[3]: [2, 4, 'hello', 8, 10]
```

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: int(int('3'*2)//11) = int(int(33/11))=int(3)

spam[int(int('3'*2)//11)] = spam[3] = d

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

Ans: spam[-1]=d

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 question

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

Ans: 1

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

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

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

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

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

Ans: + and *

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

Ans: append() adds an element at the end of a list whereas insert() can be used to insert elements at specific indices of the list.

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

Ans: del statement and remove()

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

Ans: Both lists and strings are ordered collections of characters, have indexes and slices, can be concatenated or replicated.

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

Ans: Tuples and lists are both sequence data types. They are immutable, slicable and indexable.

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

Ans:

```
In [17]: 1 t=(42)
         2 print(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 can use `list()` to get a list value's tuple form and `tuple()` get a tuple value's list form.

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

Ans:

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

Ans: `copy.copy()` makes a shallow copy of a list, while `copy.deepcopy()` makes a deep copy of a list. Only `copy.deepcopy()` will duplicate any lists inside the list.