1. What exactly is []?

This is an empty list value which is a list value that does not contain any 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)]?

The value will be ‘d’.

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

The value will be ‘d’.

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

The value will be [‘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')?

Value 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?

( \* ) is list replication operator

( + ) is list concatenation operator

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

append() : This method appends object to the end of the list

insert() : This method inserts elements at the given index

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

The two methods are:

remove() - Removes first occurrence of an item

pop() - Remove and returns items from the last index of the list.

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

It can be used in for loops.

It can be concatenated or replicated.

It has indexes and slices.

Both lists and strings can be passed to len() method.

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

Lists : They are mutable , they can have values added, removed, or changed. Lists use the square brackets , [ ]

Tuples : They are immutable, they cannot be changed at all. Tuples are written using parentheses, ( )

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

tuple = (42,)

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

The list value’s tuple form is shown by:

l = [2,3]

l1 = tuple(l)

The tuple value’s list form is shown by:

t = (3,4)

t1 = list(t)

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

The variables that contain list values are not necessarily list themselves instead they are containing list references.

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

The copy.copy() function will do a shallow copy of a list, and the nested lists will refer to the same memory location.

Whereas, the copy.deepcopy() function will do a deep copy of a list and it will add copies of the nested objects from the original list to the new copied list.