1. What exactly is []?

Ans: [] 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'

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: 'd'

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

Ans : '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 questions.

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, 11, 'cat', True, 99]

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

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

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

ans: The difference is that with append(), you just add a new entry at the end of the list. With insert(position, new\_entry) you can create a new entry exactly in the position you want.

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

Ans:The methods are remove() and pop(). remove(item) helps to remove the very first occuring entered item from the list. The pop() method removes an element from the list based on the indexof the element given. There is another method called del() that is similar to pop(). The del operator removes the item or an element at the specified index location from the list, but the removed item is not returned, as it is with the pop() method.

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

Ans: A string is a sequence of characters. A list a sequence of values which can be characters, integers or even another list (referred to as a nested list).

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

Ans: A list is mutable, whereas a tuple is immutable. This means that lists can be changed, and tuples cannot be changed. So, some operations can work on lists, but not on tuples. Also tuples are written using parentheses, ( ), while lists use the square brackets, [ ].

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

Ans : (42,)

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

Ans : tuple() and list() are two methods that are used to get a list value's tuple form and a tuple value's list form respectively.

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

Ans: Variables will contain references to list values rather than list values themselves. But for strings and integer values, variables simply contain the string or integer value. Python uses references whenever variables must store values of mutable data types, such as lists or dictionaries.

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

Ans: A copy.copy() constructs a new compound object and then (to the extent possible) inserts references into it to the objects found in the original. A copy.deepcopy() constructs a new compound object and then, recursively, inserts copies into it of the objects found in the original.