1. What exactly is []?

***[] is the empty list value.***

***It's a list with no 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.)

Let's pretend the spam includes the list ['a', 'b', 'c', 'd'] for the next three queries.

***spam[2]='hello'***

***Here the third value is at index 2.***

3. What is the value of spam[int(int('3' \* 2) / 11)]?

***('3' \* 2)= 33***

***So 33 will be passed to int before being divided by 11***

***This finally evaluates to 3.***

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

***spam[-1] evaluates to 'd'***

***Because the negative index counts from the end.***

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

Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.

***spam[:2] evaluates to ['a', 'b']***

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

***value of bacon.index('cat') 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 meaning in bacon?

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

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

***For the list concatenation + operator is used.***

***For list replication \* is used.***

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

***append() will add values only to the end of a list.***

***insert() can add values anywhere in the list.***

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

***remove()***

***del()***

***pop()***

***These can be used in removing items from a list.***

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

***Both list and strings can have indexes and can undergo slicing,It can be used in for loops.***

***It can be concatenated,replicated and also holds similar functions.***

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

***List***

***Lists are mutable***

***List values are represented using the square brackets []***

***They can have values added, removed or changed by performing different operations using the functions available.***

***Tuple***

***Tuples are immutable***

***Tuples are represented using parentheses ().***

***Tuples cannot be changed through direct operations.Also only index() and count() are the two functions available to perform in tuples.***

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

***(42,)***

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

Using tuple() and list() functions respectively we can get list values tuple form and tuple values list form

***tuple(list)***

***List(tuple)***

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

***Variables contain references to list values.***

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

***copy.copy() will just do a shallow copy of a list and it doesn't duplicate.***

***copy.deepcopy() will do a deep copy of a list.This is only one which duplicates any lists inside a list.***