1. What exactly is []?

Answer: [] indicates an empty list with no elements.

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.)

Answer: We use this code snippet – 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)]?

Answer: We will get result of the above expression as 3 and hence we get final output as d.

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

Answer: The output is d

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

Answer: Our output is a and 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')?

Answer: Here our output will be 1 since it wil return the index where cat has occurred the very first time.

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

Answer: Our new list of bacon would be [3.14,’cat’,11,’cat’,True,99]

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

Answer: bacon = [3.14,11,’cat’,True,99]

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

Answer: For list concatenation, we simply use “+” operator and for list replication we can use several operations like slicing,extend(),append(), list comprehension using for each loop ,copy(),shallowcopy() and deepcopy()

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

Answer: Append() always inserts any given element at the end of list while using insert(), we can insert them at any position we desire.

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

Answer: We can use remove() and del keyword to remove items from a list.

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

Answer: List and string values are just similar in such a way that where string are ordered collections of characters.

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

Answer : Tuples are immutable and they cannot be copied whereas lists are mutable , can be copied from one list to new list or copy to same list and append/insert at any position.

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

Answer: (42,)

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

Answer: We can get tuple values by converting tuple to a list. Similarly we can convert a list to a tuple .

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

Answer: I think they are simply some variables containing some values and their datatypes is according to the data these variables contain.

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

Answer: Copy() creates a copy of the object but references each element of the object and also if we make any change to original or copy, the change is reflected in both copied and original version as well. Deepcopy() creates a copy of the object and elements of the object and when a change is made to copied version, it stays till copied version and reflects no change on original version.