1. What exactly is []?

Ans 1.:- It is empty list having square brackets, it contains no items.

1. 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 = [2,4,6,8,10]

spam[2]= “hello”

print(spam)

spam=[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 :- spam[int(int('3' \* 2) / 11)]

As “3” is string which give 33 if we multiply ('3' \* 2) with divide 11 give remainder 0

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

Ans:- It give negative index start from end value

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

Ans:- It starts with 0 index and move 1 index neglecting the last value index 2 that is [3.14,’cat’]

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:- The index of ‘cat’ is 1

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

Ans:- It add 99 at the end of list that is [3.14, 'cat,' 11, 'cat,' True’,99]

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

Ans:- It look like [3.14, 11, 'cat', True,99]

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

Ans:- Concatenation (+)

Replication( \*)

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

Ans:- append add value at end while insert add value anywhere

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

Ans:- del() and remove() are the two methods to removing items from list

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

Ans:- Both lists and strings can be passed to len(), have indexes and slices.

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

Ans:- List is mutable we can modify list by remove and add but tuple is immutable

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() functions

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

Ans:- It contains list value

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

Ans:- copy.copy() function will do a copy of a list, while the copy.deepcopy() function will do a deep copy of a list. That is, only copy.deepcopy() will duplicate any lists inside the list.