1. What exactly is []?

🡪 [] is actually 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.)

🡪 We would assign the value ‘hello’ as the third value of the variable spam as follows:

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 of spam[int(int('3' \* 2) / 11)] is spam[3] which gives ‘d’ as the output.

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

🡪 The value of spam[-1] gives ‘d’ as the output.

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

🡪 The value of spam[:2] gives [‘a’, ‘b’] as the output.

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')?

🡪 The value of bacon.index('cat') is 1.

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

🡪 bacon.append(99) changes the look of the list value in bacon as follows:

[3.14, 'cat,' 11, 'cat’, True, 99]

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

🡪 bacon.remove(‘cat’) changes the look of the list in bacon as follows:

[3.14, 11, 'cat', True]

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

🡪 The list concatenation operator is ‘+’ and list replication operator is ‘\*’.

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

🡪 The append() method takes one argument i.e. the value to be appended, and adds it to the end of the list. The insert() method takes two arguments i.e. the index and the value to be inserted, and adds the value to the given index of the list.

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

🡪 The two methods for removing items from a list are pop() and remove().

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

🡪 The list values and string values are identical in the sense that both can be accessed with index.

E.g.:

x = [‘a’, ‘b’, ‘c’, ‘d’]

y = ‘abcd’

print(x[1])

print(y[1])

#Both the print statements will give the value at the index 1 of x and y respectively

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

🡪 Tuples are immutable and are denoted by ‘()’ whereas lists are mutable and are denoted by ‘[]’.

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

🡪 We type the tuple value that only contains the integer 42 as follows:

a = (42)

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

🡪 We can get the list values in tuple form by tuple(list\_name). We can get the tuple values in list form by list(tuple\_name).

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

🡪 Variables that "contain" list values are not necessarily lists themselves they can be tuples as well.

For e.g.:

a = ([‘a’, ‘b’, ‘c’, ‘d’], 3, True, 5.4) # [‘a’, ‘b’, ‘c’, ‘d’] has list values

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

🡪 copy.copy() creates reference to original object(If you change copied object - you change the original object). deepcopy() creates new object and does real copying of original object to new one.