1. What exactly is []?

Ans: For creating a list we use square brackets.

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

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)]?

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: It will add the number 99 at the end of the list

bacon = [3.14, 'cat’, 11, 'cat,' True, 99]

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

Ans: It removes the first occurrence of the cat.

bacon = [3.14, 11, 'cat’, True, 99]

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

Ans: List concatenation – we use + operator

List replication – we use \* operator

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

Ans: append() – It inserts or adds the element at the end of the list

insert() – It inserts an element at a particular location in the list

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

Ans: One is by using remove() method we can remove an item from the list and another is pop() method.

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

Ans: Similarity between lists and strings is both are sequences, which are ordered collections of characters. But there are two differences, one is lists are mutable whereas strings are immutable, and the other is list can store different types whereas as string only contains characters of string type.

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

Ans: Main difference is lists are mutable, but tuples are 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: For list values tuple form we can use tuple() function, For tuple values list form we can use list() function

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

Ans: It contains references to list values rather than list values themselves. But for string and integer, it contains only string or integer value.

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

Ans: A copy builds a new compound object and then inserts the elements into it from the objects in original list.

A deep copy builds a new compound object and then iteratively copies into it objects found in original list.