1. What exactly is []?

Ans: It represents 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.)

Ans: 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)]?

Ans: 'd'

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

Ans: 'd'

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

Ans: ['a', 'c']

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: [3.14, 'cat,' 11, 'cat', True,99]

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

Ans: [3.14, 11, 'cat', True,99]

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

Ans: list concatenation: +

list replication: \*

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

Ans: Append():

This function is used to modify an already existing list. Adds a new specific element at the end of the list.

Syntax: List\_Name.append(item)

Insert():

This function also modifies an already existing list. The only difference between append() and insert() is that insert function allows us to add a specific element at a specified index of the list unlike append() where we can add the element only at end of the list.

Syntax: List\_Name.insert(index, item)

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

Ans: pop(pos) and remove(item)

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

Ans: Both are iterable.

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

Ans:

SR.NO. LIST TUPLE

1 Lists are mutable Tuples are immutable

2 Implication of iterations is Time-consuming The implication of iterations is comparatively Faster

3 The list is better for performing operations, Tuple data type is appropriate

such as insertion and deletion. for accessing the elements

4 Lists consume more memory Tuple consume less memory as compared to the list

5 Lists have several built-in methods Tuple does not have many built-in methods.

6 The unexpected changes and errors are In tuple, it is hard to take

more likely to occur place.

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

Ans: t = (42)

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

Ans. t = tuple(l) # l is a list

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

Ans. Variables will contain references to list values rather than list values themselves. But for strings and integer values, variables simply contain the string or integer value. Python uses references whenever variables must store values of mutable data types, such as lists or dictionaries.

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

Ans. The difference between shallow and deep copying is only relevant for compound objects (objects that contain other objects, like lists or class instances):

A shallow copy constructs a new compound object and then (to the extent possible) inserts references into it to the objects found in the original.

A deep copy constructs a new compound object and then, recursively, inserts copies into it of the objects found in the original.