1. What exactly is []?

Empty list contains no value.

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.)

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

spam[2] = “hello”

spam

[2, 4, 'hello', 8, 10]

Let's pretend the spam includes the list ['a', 'b', 'c', 'd'] for the next three queries.

1. What is the value of spam[int(int('3' \* 2) / 11)]?

spam= ['a','b','c','d']

spam

['a', 'b', 'c', 'd']

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

Ans. ‘d’

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

‘d’

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

['a', 'b']

Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.

1. What is the value of bacon.index('cat')?

1

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

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

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

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

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

List Concatenation – with the us of + operator can easily add one list with other list

l = [1,3,5,7,9]

l1 = [2,4,6,8,10]

test = l + l1

print("Concatenated list as shown :",str(test))

Concatenated list as shown : [1, 3, 5, 7, 9, 2, 4, 6, 8, 10]

List Replication : means if you want to repeat it 3 times we can \* operator

a = [1,2,3]

a\*3

[1, 2, 3, 1, 2, 3, 1, 2, 3]

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

Append – means it adds item at the end of the list

a = [1,2,3]

a.append(4)

a = [1,2,3,4]

Insert – insert the specified value at the specified index.

a= [1,2,3]

a.insert(0,4)

[4, 1, 2, 3]

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

pop() – delete values at a particular index . and return value from the list.

remove() – it removes the first matching value from the list.

1. Describe how list values and string values are identical.
2. Both lists and strings can be passed to len(), have indexes and slices, be used in for loops, be concatenated or replicated, and be used with the in and not in operators.
3. What's the difference between tuples and lists?

Lists are mutable; they can have values added, removed, or changed. Tuples are immutable; they cannot be changed at all. Also, tuples are written using parentheses, ( and ), while lists use the square brackets, [ and ]

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

(42,)

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

Tuple(), list()

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

They contain reference to the list values.

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

The copy.copy() function will do a shallow 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.