1. What exactly is []?

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.)

spam.insert(3,"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)]?

**'d'**

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

**'d'**

5. 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.

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

**1**

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

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

It adds ‘99’ to the end of the list

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

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

It removes the the ‘cat’ item which occurs last in the list

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

list concatenation - +

Eg. 'this' +' ' + 'is' + ' ' + 'Data'

**Output:**

**'this is Data'**

list replication - \*

Eg. "this is data" \*3

**Output:**

**'this is datathis is datathis is data'**

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

Append() - adds the element to the end of the list

Eg. bacon.append(5)

**[3.14, 11, 'cat', True, 99, 5]**

Here the integer “5” is added to last position

Insert() - adds the element to any position in the list

Eg. bacon.insert(4,"Aasif")

**[3.14, 11, 'cat', True, 'Aasif', 99, 5]**

Here the string “Aasif” is added to 4th position

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

del and remove()

del bacon[1:2]

bacon

**[3.14, True, 99, 5]**

bacon.remove("Aasif") =

**[3.14, 11, 'cat', True, 99, 5]**

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

* Can be used in all loops
* Both have indices and slices
* “in” and “not in” Operators are applicable

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

Lists - Mutable - Can be edited, add or remove elements. Denoted by []

Tuple – Immutable – Cannot be edited. Denoted by ()

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

a=(42,)

type(a)

**tuple**

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

tuple value's list form - use list()

Eg: a=(42,45,85,96)

b=list(a)

b

**[42, 45, 85, 96]**

list value's tuple form – use tuple()

Eg: a=[42,45,85,96]

b=tuple(a)

b

**(42, 45, 85, 96)**

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

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

copy.copy() - Return a shallow copy of the list.

copy.deepcopy() - I don’t have any idea about this operation