1. What exactly is []?

**Ans:** 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=[0,1,2,3,4]

spam[2]="Hello"

spam

Output: [0, 1, 'Hello', 3, 4]

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:** [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:** The operator for list concatenation is + and the operator for replication is \*

list\_1 = ['a','b','c','d','e']

list\_2 = ['x','y','z']

print(list\_1 + list\_2) # List Concatenation

print(list\_2\*2) # List Multiplication

Output: ['a', 'b', 'c', 'd', 'e', 'x', 'y', 'z']

['x', 'y', 'z', 'x', 'y', 'z']

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

**Ans:** append() will insert item at the end of the list, while insert() will add the element based on the index number provided.

list\_1 = ['a','b','c','d','e']

list\_2 = ['x','y','z']

list\_1.append('item')

list\_2.insert(2,'a')

Output:

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

['x', 'y', 'a', 'z']

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

**Ans:** pop() and remove()

list\_2 = ['x','y','z']

list\_2.pop(0)

list\_2

Output: ['y', 'z']

list\_2.remove('x')

list\_2

Output : ['y', 'z']

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

**Ans:** Both lists and strings can be passed to len() function,

Can have indexes and can be sliced,

Can e used in for loops,

Can be concatenated or replicated,

and be used with the in and not in operators.

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

**Ans:** Tuples are immutable whereas lists are mutable.

Lists are enclosed within [], tuples within ()

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

**Ans:** a=(42,)

type(a)

Output: tuple

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

**Ans:** The tuple() and list() functions, respectively are used to convert a list to tuple and vice versa

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

**Ans: R**eferences to list values.

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

**Ans:** 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.