1. What exactly is []?

**[] represents a list. Data with any data type can be stored in a 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(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)]?

**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?

**If this code is executed, 99 is appended at the end of the list and saved in an int form. The list looks like**

**[3.14,’cat’,11,’cat’,True,99]**

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

**If this code is implemented, then the first occurrence ‘cat’ alone will be removed. The list looks like**

**[3.14,11,’cat’,True]**

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

**+ operator can be used for concatenation and \* operator can be used for replication**

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

**When data is appended using append(), it is inserted at the last index.**

**When data is appended using insert(), we can mention the index so that we can insert the data wherever we want**.

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

The two methods are,

**1. pop()**

**2. remove()**

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

**In both list and string values, indexing operations can be performed.**

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

**The tuples are enclosed with curly brackets whereas lists are enclosed with square brackets.**

**Tuples are immutable whereas lists are mutable**

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

**A = 42**

**B = str(42)**

**print(tuple(B))**

**This is done because a single integer value cannot be directly converted to a tuple. Therefore it is converted to a string and then converted to a tuple.**

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

**To get a list value’s tuple form,**

**tuple(list\_name)**

**To get a tuple value’s list form,**

**list( tuple\_name)**

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

**They may contain tuples or sets ( has unique elements)**

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

**copy.copy() – you are creating a copy using .copy() . If you add new data to the original list, it is not reflected in the copy whereas if you edit existing data in the original list, it gets reflected in the copy.**

**copy.deepcopy() – you are creating a copy using .deepcopy(). If you add new data to the original list, it is not reflected in the copy. Moreover, if you edit existing data in the original list, it won't get reflected in the copy as well.**