1. What exactly is []?

**[] is 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.)

**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)]?

**'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]**

**99 will be appended at 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]**

**‘cat’ at index 1 will be removed from the list**

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

**The operator for list concatenation is +, while the operator for replication is \***

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

**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**.

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

**remove(), pop() are two methods to remove items from the list.**

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

**The similarity between Lists and Strings in Python is that both are sequences. The differences between them are that firstly, Lists are mutable but Strings are immutable. Secondly, elements of a list can be of different types whereas a String only contains characters that are all of String type.**

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

**The key difference between the tuples and lists is that while the tuples are immutable objects the lists are mutable. This means that tuples cannot be changed while the lists can be modified. Tuples are more memory efficient than the lists.**

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

**(42,)**

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

**list value's can be converted to tuple form by using tuple() function.**

**Eg: k=[42,43,44]**

**tuple(k)**

**tuple value's can be converted to list form by using list() function.**

**Eg: K=(1,2,3)**

**list(k)**

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

* **integers.**
* **floats.**
* **tuples.**
* **String**

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

**copy() create reference to original object. If you change copied object - you change the original object. . deepcopy() creates new object and does real copying of original object to new one. Changing new deepcopied object doesn't affect original object.**