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[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]**

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

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

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

**Concatenation:** When + appears between two lists, the expression will be evaluated as a new list that contains the elements from both lists. The elements in the list on the left of + will appear first, and the elements on the right will appear last.

**Replication:** When \* appears between a list and an integer, the expression will be evaluated as a new list that consists of several copies of the original list concatenated together. The number of copies is set by the integer.

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

**Append method can be used for adding new element in the list only but by using insert we can add as well as can modify already occupied position. Append method takes one argument (which you have to insert in the list) while insert method takes two elements (first will be the position of element and second will the element itself).**

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

**List.pop (): Removes an item at an index position and returns it.**

**List.remove (): Removes the first item matching a value.**

**Slicing: Can be used to delete non-matching ranges of data.**

**del: Removes an item at an index position and doesn’t return it.**

**list. clear (): Removes all items in a Python list.**

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

**List and string both are used to store value /data and both are sequence. List are used to store many types of datatypes (string, float, integer, etc) but string are used to store character in single or double quotes. List are mutable and string are immutable.**

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

**List is a container to contain different types of objects and is used to iterate objects.**

**Tuple is also similar to list but contains immutable objects. Tuple processing is faster than List.**

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

**tuple = (42)**

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

**we can use tuple () function to get list values in tuple form and list () function to get tuple values in list form.**

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

**They contain references to all the list values.**

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