1. What exactly is []?

**Answer: In python a list is created by putting all the elements between the square brackets.**

**e.g lst =[1,2,4,’Ity’]**

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.)

**Answer:**

**spam= [2, 4, 6, 8, 10]**

**spam.insert(2,’hello’)**

**insert function takes to inputs, first one is the index and second one is value. Here index starts with 0 that is why for 3rd value we are using index as 2.**

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)]?

**Answer: d**

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

**Answer: d**

5. What is the value of spam[:2]?

**Answer: [‘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')?

**Answer: 1**

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

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

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

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

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

**Answer: to concatenate list : + operator can be used.**

**For list replication : \* operator can be used.**

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

**Answer: append function add the element to the list at the end position whereas insert gives us the flexibility to insert an element at a particular index.**

**Append only takes one parameter that is the element we want to enter. Whereas insert takes two parameters index and the element we want to insert at that index value.**

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

**Answer: remove : it will remove the first occurrence of the element from the list.**

**del : it will delete the all the element in the given range.**

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

**Answer: string can be defined as the ordered collection of character which is similar to how we define a list. Although list can have any type of elements in it.**

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

**Answer : the major difference is that list is mutable whereas tuples are not. Mutable means it can be changed/modified after its creation whereas we cannot modify the unmutable objects.**

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

**Answer: x=(43,)**

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

**Answer: to get list values in tuple form 🡪 for eg, list=[1,2,3,4] tup1 =tuple(list)**

**To get tuple values in list form 🡪 for e.g x=(1,2,4,5,6)**

**y=list(x)**

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

**Answer: Question is not that clear, please clarify.**

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

**Answer :**

**copy.copy() 🡪 acts as a copy by ref, if you copy a list using copy.copy() to another list,if you made any changes in the copy, it will be get reflected in the original copy.**

**copy.deepcopy() 🡪 acts as a copy by value, if you copy a list using copy.deepcopy() to another list, if you made any changes in the copy, it will not be reflected in the original copy.**