**1. What exactly is []?**

Ans. [] is used to store list elements , indexing,slicing etc.

**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. The value will be assigned as follows:

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

spam[2]="hello"

print(spam)

**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. Its value will be ‘d’

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

Ans. Its value will be ‘d’

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

Ans. Its value will be “c”

**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. Its value will be 1.

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

Ans. The output will be

[3.14,’cat’,11,’cat’,True,99]

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

Ans. The output will be

[3.14,11,’cat’,True,99]

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

Ans. The list concatenation and replication operators are “+” and “\*” respectively.

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

Ans. The difference between append() and insert() methods are as follows:

append() method adds an element to the end of the list.The argument passed in the method is added as a single element and the length of the list is increased by 1.

Syntax: list.append(element)

Whereas, insert() method inserts an element to the desired index. It has two arguments – desired index and the elements to be inserted into that index.

Syntax: list.insert(index,element)

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

Ans. Two methods for removing items from a list are:

remove() – it removes the first element matching from the list

pop() – this method removes an element from the list based on the index given as an argument and also, we can get the value of that element using pop.

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

Ans. The list and string values are identical as both are sequences.

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

ans. The difference between tuples and lists are as follows:

tuples are immutable and fixed size i.e the items of tuples cannot be changed. Hence, it is more memory efficient than lists. Tuples are enclosed within parenthesis.

Whereas, lists are mutable i.e the items of lists can be modified. Lists are enclosed within square brackets.

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

Ans. The output will be

Tup = 42,

Or

Tup=(42,)

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

Ans. We will get list value’s tuple form and tuple value’s list form by typecasting method.

Syntax: for converting list to tuple:

tuple(list)

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list(tuple)

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

Ans. Variables will contain references to list values rather than list values themselves.

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

Ans. copy.copy() is used for shallow copy operations where a reference of object is copied in other object, means that any changes made to a copy of object do reflect in the original object. It is implemented using copy() function.

Whereas, copy.deepcopy() is used for deep copy operation where a copy of object is copied in other object means that any changes made to a copy of object do not reflect in the original object.This is implemented using deepcopy() function.