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

Ans1: [] – It is an empty list, which contains no items.

**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.)**

Ans2:

Assigning the value “hello” at third position we will write the statement as follow:

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)]?**

Ans3: The value will be – ‘d’

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

Ans4: The value will be – ‘d’

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

Ans5: The value will be - ['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')?**

Ans6: The value of bacon.index(‘cat’) is 1

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

Ans7: It will add the value 99 at the last of the list as below:  
 A screenshot of a computer

Description automatically generated

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

Ans8: It will remove the first occurrence of the value ‘cat’ from the list as below:

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

Ans9: List concatenation operator is ‘+’ and List replication operator is ‘\*’.

Example:

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

Ans10: Method append() , will insert an item at the end of the list. On the other hand, method insert(), will add an item at any specified position of the list.

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

Ans11: The two methods for removing items from a list are: pop() and remove().

remove(), will remove the first occurrence of an item from a list and pop(), will remove the

last item from a list if index is not specified.

Example:

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

Ans12: Both list and string values are identical in the following ways:

* Both have a position. i.e. Every character and item in string and list has a position known as index.
* Both have lengths, which can be determined by len()
* Both are sequences and can be sliced.
* Both can be manipulated like adding or removing, searching an element.

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

Ans13:

|  |  |
| --- | --- |
| Tuple | List |
| They are immutable | They are mutable |
| They can be declared by using parentheses.  example: a = (1,2,3) | They can be declared by using square brackets. example: a = [1,2,3] |
| Need less memory | Need more memory |

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

Ans14: tuple1 = (42,)

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

Ans15: Following is the code to show list value’s tuple form and vice versa:

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

Ans16: They contain the references to list values.

Example:

A close-up of a white background

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

Ans17: copy.copy() – this is the syntax of Python shallow copy. On the other hand, copy.deepcopy() is the syntax of deep copy of the list. In case of deep copy, a copy of the object is copied into another object, i.e. any changes made to a copy of the object do not reflect in the original object.