**Solutions:**

1. What exactly is []?

Ans: The empty list value, which is a list value that 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.)

Ans: 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)]?

Ans: ‘d’

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

Ans : ’d’

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

Ans: ['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')?

Ans: 1

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

Ans: It will add the value 99 in the last position of the list. Then the length will be 6.

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

Ans: The first item named ‘cat’ will be removed from the list which will reduce the list size.

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

Ans: Concatenation:

You can concatenate multiple lists into one list by using the \* operator. **For Example**, **[\*list1, \*list2]** – concatenates the items in list1 and list2 and creates a new resultant list object. Also we can use + operator.

Replication:

Let a list be ‘a’. If you need to replicate the list **a** say 3 times, you could use the **\*** operator.

a = [1, 2, 3]

d = a \* 3

>>> d

[1, 2, 3, 4, 5, 6, 1, 2, 3, 4, 5, 6, 1, 2, 3, 4, 5, 6]

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

Ans: append() inserts the element in the last position. On the other hand insert function allows us to add a specific element at a specified index of the list

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

Ans: pop method and remove method

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

Ans: Both are iterable.

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

Ans: list is mutable and tuple is not.

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

Ans: (42,)

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

Ans: tuple(), list()

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

Ans: They contain references to list values.

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

Ans: The copy.copy() function will do a shallow copy of a list, while the copy.deepcopy() function will do a deep copy of a list. That is, only copy.deepcopy() will duplicate any lists inside the list.