1. What exactly is []?

Ans1 – This is an empty list. A list with no values

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 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 – ‘d’

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

Ans4 – ‘d’

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

Ans5 – [‘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')?

Ans7 - 1

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

Ans7 - [3.14, 'cat', 11, 'cat', True, 99]

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

Ans8 - [3.14, 11, ‘cat’, True]

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

Ans9 - list concatenation is possible through + operator whereas list replication is possible though \* operator.

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

Ans10 – append() will add the element at the end of list whereas insert() will add the element at the given position given in arguments.

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

Ans11 we can remove the items from the list using remove() method and del statement.

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

Ans12-

* Both list values and string values **have indexes and slices**.
* Both list values and string values can be **replicated or concatenated**.
* Both list values and string values can be used with **not and in operators** when used in if else or for loops etc.
* We can get length of both list values and string values using the **len() function**.

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

Ans13 – tuples are immutable , they cannot be changed and are represented by (), whereas list are mutable that means we can changed , add or remove the values.

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?

Ans15 – list value’s tuple form using tuple() function and tuple value’s list form using list() function.

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

Ans16 – They contain references to list values.

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

Ans17 – The copy.copy() function will do a shallow copy of a list this means to have 2 lists that points to same space in memory also the new list is dependent on the original list while copy.deepcopy() will do a deep copy of a list means it will duplicate a list inside a list also the new list is independent of its original list.