1.What exactly is []?

Ans:-[] is an empty list that contains no value inside it.

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.)

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:- spam = ['a', 'b', 'c', 'd']

spam[int(int('3' \* 2) / 11)]

It gives output as ‘d’

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

Ans:-The output value of spam[-1] is ‘d’ as negative index counts from last.

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

Ans:- The output value of spam[:2] is [ ‘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:- The value of bacon.index(‘cat’) is 1.

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

Ans:- The result of bacon.append (99) 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 result of bacon.remove(‘cat’) will be [3.14, 11, 'cat', True].

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

Ans:- List concatenation can be done by ‘+’ operator and list replication can be done by ‘\*’ operator.

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

Ans:- append() will add values only to the end of a list while insert() can add them anywhere in the list based upon the desired position.

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

Ans:- The two ways to remove values from a list are **del statement and remove()**.

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

Ans:- Both lists and strings can be passed to len(), both have indexes and slices, they can be used in for loops, they can be concatenated and replicated, and they are used with in and not in operators.

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

Ans:- Lists are written in [ ],they mutable ie their values can be changed , new values can have values added, removed, or changed.

Tuples are immutable; they cannot be changed at all. Tuples are written in ( and ).

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

Ans:- The tuple value can be written as (42).

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

Ans:- To get a list value’s in tuple form in can be written as tuple ( ) and to get tuple value in list form as list [ ].

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

Ans:- They contain references to the list values.

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

Ans:- The copy.copy() returns a shallow copy of the list , and copy.deepcopy() returns a deep copy of the list .In deep copy creates new object and then recursively add copies.