1. What exactly is []?

Ans) [] --> The empty value, which is the 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.)

Let's pretend the spam includes the list ['a', 'b', 'c', 'd'] for the next three queries.

Ans) spam[2] = “hello” (Notice that the third value in a list is at index 2 because the first index is 0.)

3. What is the value of spam[int(int('3' \* 2) / 11)]?

Ans) It shows TypeError: 'int' object is not subscriptable because one is int and one is str.

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

Ans) spam[-1] is ‘d’ (bec in previous we assigned spam=['a', 'b', 'c', 'd'] )

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

Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.

Ans) spam[: 2] is ‘['a', 'b']

6. What is the value of bacon.index('cat')?

Ans)bacon=[3.14, 'cat', 11, 'cat', True]

bacon.index('cat')

**output** : 1

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

Ans) bacon=[3.14, 'cat', 11, 'cat', True]

bacon.append(99)

**output** [3.14, 'cat', 11, 'cat', True, 99]

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

Ans) bacon=[3.14, 'cat', 11, 'cat', True]

bacon.remove('cat')

bacon

**output :** [3.14, 11, 'cat', True]

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

Ans) The operator for list concatenation is +, while the operator for replication is \*

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

Ans) The difference between append() and insert() is :

The append() methos will puts the value at the end of the list.Foe example: l= [1,2,3,4]

l.append(5)

**output :** [1,2,3,4,5]

The insert() method will puts the value by using the index value. For example: l = [1,2,3,4]

l.insert(2,4)

**output :**  [1,2,4,4] (notice 3 is replace with 4 because the index of 3 is 2 it starts from 0).

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

Ans) The methods for removing items from a list are : pop() and remove()

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

Ans) 1) Lists are mutable but strings are immutable.

2) Elements of a list can be of different types whereas a string only contains characters that are all of string type.

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

Ans) The difference between tuples and lists are:

Tuples are immutable and lists are mutable that means tuples can cannot be changed but the lists can modified.

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

Ans) tup1=(42)

tup2=(42,)

print(type(tup1))

print(type(tup2))

output: <class 'int'>

<class 'tuple'>

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

Ans) The tuple() and list () functions, respectively are used to convert a list to tuple and viceversa.

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

Ans) They contains references to list values.

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

Ans) The copy.copy() function will do a copy of a list, while the copy.deepcopy() will dulipcate any lists inside the list.