1. What exactly is []?

   It is a empty list which contain no item

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.)

   spam[3] ='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)]?

   The value is 'd'

   because '3'*2 = 33

   	int(int(33)/11) =3

   	spam[3]='d'

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

   spam[-1] = 'd'

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

   spam[:2] = ['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')?

   bacon.index('cat') = 1

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

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

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

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

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

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

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

   The only difference between append() and insert() is that insert function allows us to add a specific element at a specified index of the list unlike append() where we can add the element only at end of the list.

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

we can use pop() function (or)

we can use remove() function

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

Lists are mutable but Strings are immutable. Secondly, 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?

The key difference between the tuples and lists is that while the tuples are immutable objects the lists are mutable

the tuple can be changable but tuple is not changeable

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

(42)

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

To get the list values tuple from for that we can use :

```
sample_list = [1,2,3]

#convert list into tuple
tuple1 = tuple(sample_list)
```
TO get a tuple value's list form:
sample=(1,3,2)
list1 = list(sample)

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

They instead contains references to list values

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

copy() create reference to original object. If you change copied object - you change the original object. . deepcopy() creates new object and does real copying of original object to new one.