1. What exactly is []?

Ans 1 - List is made with square brackets [], elements are separated by commas.

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 2 -

l = [2,4,6,8,10]  
for i in l:  
 if l[2] == 6 :  
 l[2] = "Hello"  
print(l)

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 3 - d

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

Ans 4 - d

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

Ans 5 - ['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 6 - 1

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

Ans 7 - [3.14, 'cat', 11, 'cat', True, 99]

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

Ans 8 - [3.14, 11, 'cat', True]

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

Ans 9 - Concatenation is done by + operator and Sequences datatypes (both mutable and immutable) support a repetition operator \* The repetition operator \* will make multiple copies of that particular object and combines them together.

For eg : List concatenation -

a = [1,2]

b = [3,4]

c = a+b

c will contain [1,2,3,4]

List replication -

c = a\*3

c will be [1,2,1,2,1,2]

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

Ans 10 - There is a simple difference between append and insert in python list,append method can be use for adding new element in the list only but by using insert we can add as well as can modify already occupied position.

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

Ans 11 - remove(), pop()

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

Ans 12 - The similarity between Lists and Strings in Python is that both are sequences.

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

Ans 13 - tuples : A tuple, like a list, is a sequence of items of any type. The printed representation of a tuple is a comma-separated sequence of values, enclosed in parentheses. Eg - (1,2,'hi',[9,5],7)

lists : A list is a sequential collection of Python data values, where each value is identified by an index. The values that make up a list are called its elements. Lists are similar to strings, which are ordered collections of characters, except that the elements of a list can have any type and for any one list, the items can be of different types. Eg - [1,2,3,4,'hi',8.9]

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

Ans 14 - (42,)

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

Ans 15 - List into Tuple : Using tuple() builtin function or Using loop inside the tuple

Tuple into List : We can use the list() builtin function to convert tuple to list in Python

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

Ans 16 - They contain references to list values

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

Ans 17 - .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. Changing new deepcopied object doesn't affect original object.