1. What exactly is []?

Ans: This is an empty list.

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: spam.insert(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)]?

Ans: The expression evaluates to spam[3] which is ‘d’

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

Ans: Here also it means the last value in the list which is ‘d’

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

Ans: It would give [‘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: It returns the index of the first ‘cat’ in the list i.e. 1

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

Ans: It appends a value of 99 at the end of the list as: [3.14, 'cat,' 11, 'cat,' True, 99]

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

Ans: It will remove the first ‘cat’ and the list becomes: [3.14, 11, 'cat,' True, 99]

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

Ans: Two lists can be concatenated with “**+”** operator and replicated with “**\*”** operator

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

Ans: append method inserts a value at the end of the original list but append method can be used to insert a value at any position in the list.

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

Ans: We can use pop and remove methods to remove elements from a list.

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

Ans: In both list and string we can access any element with the index number and also we can slice both strings and lists just by defining the range of index

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

Ans: The most important difference between tuples and lists is that lists are mutable meaning we can change values of the list elements however tuples are immutable.

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?

Ans: To get list values in tuple form we write: tuple(list) and list(tuple) for getting list form of tuple values

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

Ans: The variables containing the list actually contains the reference to the list values rather than actually containing the list itself.

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

Ans: copy.copy() actually creates a new reference to the original object such that if we change the copied object it also changes the original object. On the other hand, deepcopy() creates a whole new object altogether such that changing the deepcopied object does not change the original object at all.