**1. What exactly is []?**

Ans: [] are index brackets, these are used to define a list in Python.

**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: ‘d’

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

Ans: ‘d’

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

Ans: [‘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: 1

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

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

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

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

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

Ans: List concatenation operator: +, +=

List replication operator: \*, \*=

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

Ans: append method adds an element in the list at then end position. Insert method can add or modify element at any position of the list.

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

Ans: pop() method to remove from the last index and remove() method to remove any particular element.

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

Ans: Both List and String stores data in sequence. List can contain heterogeneous data types but String can store only character types. List and String elements or character positions can be accessed using indexes. List is mutable but String is immutable.

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

Ans: Lists are mutable, but tuples are immutable. List is preferred for insertion and deletion operation, Tuple is preferred for data access operation. Tuple is comparatively faster than Lists.

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

Ans: sample = (42,)

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

Ans: List to tuple: tuple(sample\_list)

Tuple to List: list(sample\_tuple)

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

Ans: The variable that “contain” list values are a reference to a list object. It is a reference.

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

Ans: copy.copy() is a shallow copy operation, where a copy of reference will be provide not the actual object. Both reference will point to same object and any change made to the object will be visible by both reference. Copy.deepcopy() is a Deep copy operation, where a copy of the object is copied in another object. Both reference have their own set of object and they don’t share the object. Any change made to any one object will be visible to that particular reference only, other reference will not be impacted.