**ANSWERS**

**Q1. What exactly is []?**

**Ans.** [] is an empty list value i.e a list value which contains no items. It is similar to an empty string value.

**Q2. 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” (The third value in the list would be placed at index 2)

**Q3. What is the value of spam[int(int('3' \* 2) / 11)]?**

**Ans.** 'd' (Note that '3' \* 2 is the string '33', which is passed to int() before being divided by 11. This eventually evaluates to 3. Expressions can be used wherever values are used.)

**Q4. What is the value of spam[-1]?**

**Ans.** Value of spam[-1] evaluates to ‘d’ as the negative indexes count from the end.

**Q5. 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.** Value of spam[:2] evaluates to [‘a’, ’b’]

**Q6. What is the value of bacon.index('cat')?**

**Ans.** Value of bacon.index(‘cat’) evaluates to 1.

**Q7. How does bacon.append(99) change the look of the list value in bacon?**

**Ans.** bacon.append(99) will make the new list look like [3.14, 'cat', 11, 'cat', True, 99].

**Q8. How does bacon.remove('cat') change the look of the list in bacon?**

**Ans.** bacon.remove(‘cat’) will make the new list look like [3.14, 11, 'cat', True].

**Q9. What are the list concatenation and list replication operators?**

**Ans**. The operator for list concatenation is +, while the operator for replication is \*. (This is the same as for strings.)

**Q10. What is difference between the list methods append() and insert()?**

**Ans.** The main difference between append() and insert() is that, append() will add values only to the end of a list while insert() can add them anywhere in the list.

**Q11. What are the two methods for removing items from a list?**

**Ans.** The two ways for removing items from a list are the ‘del’ statement and the remove() list method.

**Q12. Describe how list values and string values are identical.**

**Ans.** The similarities between list values and string values are as follows :

* Both lists and strings can be passed to len().
* Both lists and strings have indexes and slices.
* Both lists and strings can be used in for loops.
* Both lists and strings can be concatenated or replicated.
* Both lists and strings can be used with the in and not in operators.

**Q13. What's the difference between tuples and lists?**

**Ans.** The differences between lists and tuples are as follows :

* While lists are mutable, values can be added, removed or changed, tuples are immutable, they cannot be changed at all.
* Lists are written using the square brackets [ ] while tuples are written using the parenthesis ( ).

**Q14. How do you type a tuple value that only contains the integer 42?**

**Ans.** We can do the same by typing (42,) (The trailing comma is mandatory).

**Q15. How do you get a list value's tuple form? How do you get a tuple value's list form?**

**Ans.** We can get the tuple form of a list value by using tuple() function and we can get the list form of a tuple value by using the list() value.

**Q16. Variables that "contain" list values are not necessarily lists themselves. Instead, what do they contain?**

**Ans.** They contain references to list values.

**Q17. How do you distinguish between copy.copy() and copy.deepcopy()?**

**Ans.** The copy.copy() function will do a shallow copy of a list, while the copy.deepcopy() function will do a deep copy of a list i.e copy.deepcopy() will duplicate any lists inside the list.