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

**Ans :** It defined the 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 :**  using the in-built function of the list .insert() 🡪 spa.insert(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)]?**

**Ans :** It is gives 3 in the output as the form of int.

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

**Ans :** It gives the last value of the list using -1.

**5. 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 :** In the output : [3.14, ‘cat’].

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

**Ans :** 2

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

**Ans :**  In the output 🡪 [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 :** l = ['piyush', 'raj', 'piyush'], l1 =[1,2,3,4]

print(l + l1) print(l \* 2) concatenation operation perform by the ‘+’ to merge the both list.

Replication operation in the python ‘\*’.

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

**Ans :** .append() method is used to added the element in the list at the end of the list and not added the multiple element in the list. .insert(index, element) method is used to added the element in the list at the particular index.

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

**Ans :** del and .remove(), .clear(), .pop()

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

**Ans :** Both list values and string values are iterable, meaning that you can loop over the elements of the collection.

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

**Ans :** List is mutable in the nature whereas the tuples are immutable in the nature.

List is defined by the “[, ]”braces whereas the tuple is defined as the “(,)”.

List used the list() class and tuple is the tuple() class.

List has consume the more memory whereas the tuple is not consume the more memory.

List has the in-built method whereas the tuple is not have more in-built method.

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

**Ans :** t = (42)

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

**Ans :** list\_value = [1, 2, 3]

tuple\_form = tuple(list\_value)

print(tuple\_form)

tuple\_value = (1, 2, 3)

list\_form = list(tuple\_value)

print(list\_form)

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

**Ans** : # Original list

list\_value = [1, 2, 3]

# Assign the list to a new variable

list\_reference = list\_value

# Modify the list through one of the references

list\_reference.append(4)

# The change is reflected through both references

print(list\_value) # Output: [1, 2, 3, 4]

print(list\_reference) # Output: [1, 2, 3, 4]

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

**Ans :** copy.copy() using that copy by the actual object and if modified in the list and change into the shallow copy.

Copy.deepcopy() using that copy by the actual object and if not modified in the list and not change into the shallow copy.