1. What exactly is []?

Ans:[] 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:Code is given below.

spam = [2,4,6,8,10]

spam.insert(2,"hello")

print(spam)

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:

spam = ['a', 'b', 'c', 'd']

spam[int(int('3' \* 2) / 11)]

#Output

'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:The index is 1

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

Ans:This will generate a new list with appended element.

[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]

The first occurrence of “cat” will be removed.

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

Ans:The list concatenation operators is “+” and list replication operator is “\*”.

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

Ans:The append() method adds an element at the end of the list while the insert() method adds an element at the designated index.

for eg:list\_name.append(7) # This will append 7 at the end of the list.

list\_name.index(3,” hello”) # This will append “hello” at the third index.

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

Ans: The two methods are

1)list\_name.pop()

2)list\_name.remove()

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

Ans: Lists and String have lots of similarities.

[1] They both are indexed.

[2]They both support slicing operations.

[3]They both are iterable.

[4]They both can be concatenated with simple arithmetic operations

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

Ans:The main difference between lists and tuples are lists are mutable while tuples are immutable means lists element can be changed after the lists is defined while tuple elements can’t be changed.

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

Ans:my\_tup = (42, )

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

Ans:The code is given below:

l1 = [1,2,3,4,5]

print(tuple(l1))

t1 = ("a","b","c","d")

print(list(t1))

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

Ans:Variables that "contain" list values are not necessarily lists themselves. Instead they just contain the address of the list means they just act as pointer that is pointing towards the memory location of the list.

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

Ans:copy.copy() creates a new copied object but does not creates the the copies of the elements in the objects while copy.deepcopy() created a new objects and also copies the elements inside the objects,.