

1. What exactly is []?

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.)

```
l.insert(2,'hello')
```

Hence resultant list is: [2,4, 'hello',6,8,10]

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)]?

d

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

d

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

['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')?

1

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

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

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

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

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

+ can be used as list concatenation operator:

eg: a = [1,2], b = [3,4]

a+b -> [1,2,3,4]

while * is the list replication operator:

eg: s = ['a', 'b', 'c', 'd']

a = 2

print(s*a)

output is

```
['a', 'b', 'c', 'd', 'a', 'b', 'c', 'd']
```

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

append always insert to the last of the list . while insert() add element at particular index within list

eg: s = ['a', 'b', 'c', 'd']

s.append('p')

s.insert(3,'q')

print(s)

output is :

```
['a', 'b', 'c', 'q', 'd', 'p']
```

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

pop and remove as illustrated below:

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

s.remove('a')

s.pop(2)

print(s)

output : ['b','c']

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

both can be iterated using a for loop for any operations to be performed.

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

| | |
|---------------------|--------------------|
| Tuples | List |
| Represented as () | represented as [] |
| Immutable in nature | Mutable in nature |
| length is fixed | length is variable |

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

```
print((42,))
```

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

list values tuple: ([1,2])

tuple value's list: [(1,2)]

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

Contains can also be used to check for a substring within a string value.

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

deepcopy() creates new object and does real copying of original object to new one. ... deepcopy() copies original object recursively, while . copy() create a reference object to first-level data of original object.