1.What exactly is []?

**It is a datatype to store multiple items in single variable like Array.**

**It is Ordered , changeable , and allow duplicate values.**

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.) **spam.append(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)]? **d ( 33/11 = 3 , 4th value as the index starts with 0)**

4. What is the value of spam[-1]? **d ( Last value )**

5. What is the value of spam[:2]? **[‘a’,’b’] 0 to 2 and omits 2.**

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** – index of first occurrence cat

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

8. How does bacon.remove('cat') change the look of the list in bacon? **Removed that value and index rearranged.**

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

**the concatenation operator + connects one string at the end of the other.**

**‘Span’+’Span’ = SpanSpan**

**the replication operator \* produces the n number of copies of a string, n may be any integer**

**‘Span’\*5 = Span Span Span Span Span**

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

**The element passed as an argument is appended to the end of the list , The element passed as the argument can be inserted at any desired position by passing the index along with it as a parameter. Span.append(“last”) Span.insert(1,”Second”)**

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

**bacon.pop() ,**

**del(bacon[1]) ,**

**bacon.clear()**

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

**ordered collections of characters, except that the elements of a list can have any type and for any one list, the items can be of different types. Able to retrieve the data using index / slicing in both list and string**

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

**Lists are mutable , Ordered , better for performing operations, such as insertion and deletion. It consumes more memory.Tuples are immutable , Unordered , appropriate for accessing the elements ,  consume less memory as compared to the list**

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

**If a tuple that has one value in it, then it needs to have a trailing comma in it. c = (42,)**

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

**List(Tup) , tuple(Lst) – To convert list to tuple and vice versa.**

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

**Any data types we can store inside a list , We can store Tuples as well as list inside the list.**

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

**Copy() create reference to original object. If you change copied object - you change the original object. . deepcopy() creates new object and does real copying of original object to new one. Changing new deepcopied object doesn't affect original object.**