1) . What is the difference between enclosing a list comprehension in square brackets and parentheses?

When we are closing the comprehension in square brackets those are called lists while when we are closing the comprehension in parentheses those are tuples.

2) What is the relationship between generators and iterators?

A generator is somewhat of a function that returns an iterator object with a succession of values rather than a single item.

An iterator is an object used to iterate over iterable objects such as lists, tuples, dictionaries, and sets.

Every generator is an iterator but every iterator is not a generator.

3) What are the signs that a function is a generator function?

A function is said to be a generator function if it has one or more yield statements, unlike than regular functions. Calling a generator function returns a generator object.

4) What is the purpose of a yield statement?

A yield statement looks much like a return statement, except that instead of stopping execution of the function and returning, yield instead provides a value to the code looping over the generator and pauses execution of the generator function.

5) What is the relationship between map calls and list comprehensions? Make a comparison and contrast between the two.

List comprehension are used when a list of results is required.

Map calls only returns a map object and does not return any list.

List comprehension is faster than map when we need to evaluate expressions that are too long or complicated to express.

Map is faster in case of calling an already defined function (as no lambda is required).