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

Enclosing a list comprehension in square brackets returns a list but enclosing a list comprehension in parentheses returns a generator object

2) What is the relationship between generators and iterators?

An iterator is an object which contains a countable number of values and it is used to iterate over iterable objects

like list, tuples, sets, etc. Iterators are implemented using a class

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

A generator function uses a yield statement instead of a return statement.

A generator function will always return a iterable object called generator.

where as a normal function can return a string/list/tuple/dict/NoneType etc

4) What is the purpose of a yield statement?

The yield statement suspends function’s execution and sends a value back to the caller, but retains enough state to enable function to resume where it is left off.

When resumed, the function continues execution immediately after the last yield run.

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

1) List comprehension is more concise and easier to read as compared to map.

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

3) Map is faster in case of calling an already defined function on a set of values.