1) . What is the difference between enclosing a list comprehension in square brackets and parentheses?  
ANS: list with square bracket is list and list with round bracket ”()” is a tuple  
list is mutable tuple is not  
list is

2) What is the relationship between generators and iterators?  
ANS:

|  |  |
| --- | --- |
| **Iterator** | **Generator** |
| Iterators are used mostly to iterate or convert other objects to an iterator using iter() function. | Generators are mostly used in loops to generate an iterator by returning all the values in the loop without affecting the iteration of the loop |

3) What are the signs that a function is a generator function?  
ANS:   
If a function contains at least one yield statement (it may contain other yield or return statements), it becomes a generator function. Both yield and return will return some value from a function.  
The difference is that while a return statement terminates a function entirely, yield statement pauses the function saving all its states and later continues from there on successive calls.

4) What is the purpose of a yield statement?  
Ans:   
The Yield keyword in Python is similar to a return statement used for returning values or objects in Python. However, there is a slight difference. The yield statement returns a generator object to the one who calls the function which contains yield, instead of simply returning a value.

5) What is the relationship between map calls and list comprehensions? Make a comparison and contrast between the two.  
ans:   
List comprehension is more concise and easier to read as compared to map. List comprehension are used when a list of results is required as map only returns a map object and does not return any list. Map is faster in case of calling an already defined function (as no lambda is required).