Answer following questions.

1. Result set is set of data returned by a select statement or stored procedure which could be empty or not and can be stored in some file in RAM or printed on screen.
2. The main difference between Union and Union All is that after Union of two result sets all the intersecting rows are only returned once whereas in Union All intersecting rows from both the result sets are returned so there are duplicates rows of matching entities.
3. There are four set operators, other than Union and Union All are
   1. Intersect: return the rows which are common in both result sets.
   2. Except: It is same as minus in math set i.e., takes data from first result set, but not the second.
4. Join: On matched condition data between many tables data are combined and results into new columns.

Union: It results into new distinct rows after the result sets of two or more SELECT statements are combined.

1. Inner Join returns only the common rows from two tables whereas Full join returns all the matching and non-matching rows from both tables.
2. Left Outer Join all the common rows from both tables and the remaining rows of the left table and columns of right table are null padded.
3. Cross join creates a paired combination of all the rows in first table with all the rows in second table.
4. The WHERE is the conditional clause in Select statement which is applies to individual rows. The HAVING clause is a search condition on a query with GROUP BY or an aggregated value.
5. Yes, there can be multiple groups by columns.