5.1)

```
SELECT groupfn(col1) [AS 'newcolname'], groupfn1(col2) [AS 'newcolname1'], ... ...
FROM tablename
[WHERE condition]
...
...
```

a) Show the total no of employees, their total salary, their average salary, their max salary, their min salary from employees table.
b) Show the maximum and minimum value of min_salary column, maximum and minimum value of max_salary column from job_history table.
c) Count the total no of distinct job_id s from employees table.
d) Count the distinct no of countries from the locations table.

5.2)

```
SELECT col1, col2, groupfn(col3), groupfn1(col4), ... ...
FROM tablename
[WHERE condition]
GROUP BY col1, col2;
/* here you can only show col1 and col2 directly.
   All the other columns must within group functions.
*/
```

a) Show each region_id and corresponding no of countries in that region from countries table.
b) Show the location_id and corresponding no of departments in that location from departments table.
c) For each department_id, show the no of employees in that department from the employees table.
d) For each manager_id, show the no of employees under his supervision from the employees table.
e) For each job_id, show the no of employees in that job type from the employees table.
f) For each department_id, show the no of managers from that department using employees table.
g) Show the department wise total no of employees, maximum and minimum salary in that department, average and total salary paid for that department from the employees table.
h) For each year, show the total no of employees who were hired during that year from the employees table.
i) Show the total no of jobs within 0k to 10k, 10k to 20k and so on salary ranges(max_salary-min_salary) groups from the jobs table.
j) For each job_id and each department, show the total no of employees in that group from the employees table.
k) For each year and each month show the total no of employees who have left their jobs from the job_history table.
l) For each country_id, show the total no of locations in that country from the locations table.
m) For each city, show the total no of locations in that city from the locations table.
n) Group employees based on the first letter of their names. (max 26 groups as 26 alphabets)

5.3)

```
-- 5.3>> Group filtering
SELECT col1, col2, groupfn(col3), groupfn1(col4), ... ...
FROM tablename
[WHERE condition]
GROUP BY col1, col2
HAVING condition
[ORDER BY ... ...]
[LIMIT ... ...];
/* Having condition may involve only col1/col2.
   For other columns you must use group functions within the condition of HAVING clause
```

```
*/
```

a) Show only those manager_id s who handle more than 5 employees.
b) Show only those department_id s who in total expenses more than 100000 dollar for his employees salaries.
c) Count the total no of employees for each department. Don't consider employees of job_id "AS_PRESS" and also consider only those departments where total no of employees is greater than 5.
d) Group employees based on the first 3 digit of their phone number. Avoid employees from department no 10/20/60 and also avoid those groups where total salaries of employees is less than 50000.

6.2)

```
SELECT t1.*, t2.*, t3.col1, t3.col2, ... ...
FROM tablename1 AS t1

     JOIN
     tablename2 AS t2
     ON join_condition

     JOIN
     tablename3 AS t3
     ON join_condition

[WHERE condition]
...
...
```

a) Show the region_name and corresponding country_name
b) Show the department_name and corresponding country_name.
c) Show the employee_name and his country_name.
d) Show the employee_name and his job_title.

e) Show the employee_name and his manager_name
f) Show the department_name and the manager_name of this department.
g) Show the employee_id, his salary, his manager_id, his manager_name, his manager_salary.
h) Show the employee_id, his join_date, his manager_id, his manager_name, his manager_salary.
i) Show the manger_name and his manager_name(manager of manager).
j) Show the employees name and other employees name who receives higher salary than him
k) Show the employees name and other employees name who is hired after him.

l) For each region, show the region_name and total no of employees in that region.
m) For each job, show the job_title and total no of employees.
n) For each country, show the total no of departments in that country.
o) For each department, show the department_name and corresponding total no of ex-employees(job_history table) from that department.

p) For each manager, show the manager_name and total no of employees under his supervision.
q) For each manager, show the manager_name and total no of employees under his supervision who receives higher salary than him.
r) Show the employee name and no of employees who receives lower salary than him.
s) Show the employee name and no of employees who is hired before him.