Set A

1. Find the employee id, full name (first name <space> last name), department id, total monthly salary with commission percentage of the employees whose first name starts with 'D' and the fourth character of the last name is 'n' and works in departments with ID between 20 and 70. (Assume zero commission percentage for the employees with null commission percentage)

   SELECT employee_id, first_name || ' ' || last_name AS FULL_NAME, hire_date,

   12 * salary + 12 * salary * NVL (commission_pct, 0) AS SAL FROM employees

   WHERE first_name LIKE 'S_e%' AND hire_date < '01-JAN-2006'

2. Display job ID of jobs that were done by at least two employees for at least 100 days.

   SELECT department_id FROM job_history WHERE end_date - start_date <= 600

   GROUP BY department_id HAVING COUNT (*) <= 1

3. Show the department_id, minimum, maximum, and average salary of all departments except dpeartment_id 30. Sort the list in descending order of the difference between maximum salary and minimum salary of each department and then sort by average salary in ascending order.

   SELECT department_id, MIN (salary), MAX (salary), AVG (salary) FROM employees

   WHERE department_id <> 30

   GROUP BY department_id

   ORDER BY MAX (salary) - MIN (salary) DESC, AVG (salary) ASC

4. Find the number of employees that were hired on each weekday in each job (job id). Print weekday (e.g. Saturday, Sunday, Monday etc.), job id, total employees hired, and average salary of those employees. Print the rows in which at least two employees were hired and have an average salary of at least 7000.

   SELECT TO_CHAR (hire_date, 'DAY') AS WeekDay, job_id, COUNT (*), avg(salary) FROM employees

   GROUP BY TO_CHAR (hire_date, 'DAY'), job_id

   HAVING COUNT (*) >=2 AND avg(salary) >= 7000

5. For each country, show country_id, number of cities and number of provinces. Sort the output in ascending order of country_id. Discard those countries which have no provinces and less than two cities.

   SELECT country_id, COUNT (city), COUNT (state_province) FROM locations

   GROUP BY country_id

   HAVING COUNT (state_province) > 0 AND COUNT (city) >= 2 ORDER BY country_id

Set B

1. Find the employee id, full name (first name <space> last name), hire date, total annual salary with commission percentage of the employees whose first name starts with 'S' and the third character of the first name is 'e' and has joined before 2006. (Assume zero commission percentage for the employees with null commission percentage)

   SELECT employee_id, first_name || ' ' || last_name AS FULL_NAME,hire_date,

   12 * salary + 12 * salary * NVL (commission_pct, 0) AS SAL FROM employees

   WHERE first_name LIKE 'S_e%' AND hire_date < '01-JAN-2006'

2. Display department IDs in which at most 1 employee had worked for at most 600 days.

   SELECT department_id FROM job_history WHERE end_date - start_date <= 600

   GROUP BY department_id HAVING COUNT (*) <= 1

3. Show the department_id, minimum hire_date, maximum hire_date, and average salary of all departments. Sort the list in ascending order of the difference between maximum and minimum hire_date of each department and then sort by average salary in descending order. Make sure no null values are printed.

   SELECT department_id, MIN (hire_date), MAX (hire_date), AVG (salary) FROM employees

   WHERE department_id IS NOT NULL

   GROUP BY department_id

   ORDER BY MAX (hire_date) - MIN (hire_date) ASC, AVG (salary) DESC

4. Find the number of employees that were hired in each month in each department. Print month, department id, total employees hired, and average salary of those employees. Print the rows in which at least three employees were hired and having an average salary of at most 5000.

   SELECT TO_CHAR (hire_date, 'MONTH') AS MONTH, department_id, COUNT (*) AS COUNT, avg(salary) AS avg FROM employees

   GROUP BY TO_CHAR (hire_date, 'MONTH'), department_id

   HAVING avg(salary) <= 5000 AND COUNT (*) >= 3

5. For each manager, show manager_id, number of employees and maximum salary under the manager. Sort the output in descending order of manager_id. Only show those managers who have no more than 5 employees under supervision and make sure that no null values are printed.

   SELECT manager_id, COUNT (employee_id), MAX (salary) FROM employees

   WHERE manager_id IS NOT NULL GROUP BY manager_id

   HAVING COUNT (employee_id) <=5 ORDER BY manager_id DESC