Answers for Queries:

Set 1

Consider the following schema:

Suppliers(sid: integer, sname: string, address: string)

Parts(pid: integer, pname: string, color: string)

Catalog(sid: integer, pid: integer, cost: real)

1. Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.

2. Find the names of suppliers who supply some red part.
   Ans: SELECT S.sname
        FROM Suppliers S, Parts P, Catalog C
        WHERE P.color='red' AND C.pid=P.pid AND C.sid=S.sid

3. Find the sids of suppliers who supply some red or green part.

   Ans: SELECT C.sid

        FROM Catalog C, Parts P

        WHERE (P.color = 'red' OR P.color = 'green')

        AND P.pid = C.pi

4. Find the sids of suppliers who supply some red part or are at 221 Packer Ave.
   Ans: SELECT S.sid FROM Suppliers S
        WHERE S.address = '221 Packer street'
        OR S.sid IN (SELECT C.sid
                FROM Parts P, Catalog C
                WHERE P.color='red'
                AND P.pid = C.pid)

5. Find the sids of suppliers who supply some red part and some green part.
   Ans: SELECT C.sid
        FROM Parts P, Catalog C
        WHERE P.color = 'red'
                AND P.pid = C.pid
                AND EXISTS (SELECT P2.pid
                        FROM Parts P2, Catalog C2
                        WHERE P2.color = 'green'

AND C2.sid = C.sid

AND P2.pid = C2.pid)

6. Find the sids of suppliers who supply every red or green part.

Ans: SELECT C.sid
FROM Catalog C
WHERE NOT EXISTS (SELECT P.pid
     FROM Parts P
    WHERE (P.color = 'red' OR P.color = 'green')
      AND (NOT EXISTS (SELECT C1.sid
        FROM Catalog C1
      WHERE C1.sid = C.sid AND C1.pid = P.pid)))

7. Find the sids of suppliers who supply every red part or supply every green part

Ans: SELECT C.sid FROM Catalog C
 WHERE (NOT EXISTS (SELECT P.pid FROM Parts P
   WHERE P.color = 'red' AND (NOT EXISTS (SELECT C1.sid
FROM Catalog C1
       WHERE C1.sid = C.sid AND C1.pid =
P.pid))))
     OR (NOT EXISTS (SELECT P1.pid FROM
Parts P1
    WHERE P1.color = 'green'
    AND (NOT EXISTS (SELECT C2.sid FROM
Catalog C2
     WHERE C2.sid = C.sid AND C2.pid =
P1.pid))))

8. Find pairs of sids such that the supplier with the first sid charges more for some part than the supplier with the second sid.

Ans: SELECT C1.sid, C2.sid

FROM Catalog C1, Catalog C2

 WHERE C1.pid = C2.pid

  AND C1.sid 6= C2.sid

  AND C1.cost > C2.cost

9. Find the pids of parts that are supplied by at least two different suppliers.

SELECT C.sid FROM Catalog C

 WHERE EXISTS (SELECT C1.sid FROM Catalog C1

   WHERE C1.pid = C.pid AND C1.sid 6= C.sid)

10. Find the pids of the most expensive parts supplied by suppliers named Yosemite Sham.

Ans: SELECT C.pid FROM Catalog C, Suppliers S

WHERE S.sname = 'Yosemite Sham'

AND C.sid = S.sid AND C.cost ≥ ALL (Select C2.cost FROM Catalog C2, Suppliers S2   WHERE S2.sname = 'Yosemite Sham' AND C2.sid = S2.sid)

Set 2

Consider the following relations containing airline flight information:

Flights(flno: integer, from: string, to: string, distance: integer, departs: time, arrives: time) Aircraft(aid: integer, aname: string, cruisingrange: integer)

Certified(eid: integer, aid: integer)

Employees(eid: integer, ename: string, salary: integer)

1. Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.

2. Find the eids of pilots certified for some Boeing aircraft.
   Ans: SELECT C.eid FROM Aircraft A, Certified C
   WHERE A.aid = C.aid AND A.aname = 'Boeing'

3. Find the names of pilots certified for some Boeing aircraft.
   Ans: SELECT E.ename FROM Aircraft A, Certified C, Employees E WHERE A.aid = C.aid AND A.aname = 'Boeing' AND E.eid = C.eid

4. Find the aids of all aircraft that can be used on non-stop flights from Bonn to Madras.

   Ans: SELECT A.aid FROM Aircraft A, Flights F WHERE F.from = 'L.A.' AND F.to = 'N.Y.' AND A.cruisingrange > F.distance

5. Identify the flights that can be piloted by every pilot whose salary is more than $100,000. Ans: SELECT E.ename FROM Aircraft A, Certified C, Employees E, Flights F WHERE A.aid = C.aid AND E.eid = C.eid AND distance < cruisingrange AND salary > 100,000

6. Find the names of pilots who can operate planes with a range greater than 3,000 miles but are not certified on any Boeing aircraft.

   Ans: SELECT E.ename FROM Certified C, Employees E, Aircraft A WHERE A.aid = C.aid AND E.eid = C.eid AND A.cruisingrange > 3000 AND E.eid NOT IN (SELECT C2.eid FROM Certified C2, Aircraft A2 WHERE C2.aid = A2.aid AND A2.aname = 'Boeing')

7. Find the eids of employees who make the highest salary.

   Ans: SELECT E.eid FROM Employees E WHERE E.salary = (Select MAX (E2.salary) FROM Employees E2)

8. Find the eids of employees who make the second highest salary.

Ans: SELECT E.eid FROM Employees E WHERE E.salary = (SELECT MAX (E2.salary) FROM Employees E2 WHERE E2.salary 6=(SELECT MAX (E3.salary) FROM Employees E3))

9.. Find the eids of employees who are certified for the largest number of aircraft.

Ans: SELECT Temp.eid FROM (SELECT C.eid AS eid, COUNT (C.aid) AS cnt, FROM Certified C GROUP BY C.eid) AS Temp WHERE Temp.cnt = (SELECT MAX (Temp.cnt) FROM Temp)

10. Find the eids of employees who are certified for exactly three aircraft.

Ans: SELECT C1.eid FROM Certified C1, Certified C2, Certified C3

WHERE (C1.eid = C2.eid AND C2.eid = C3.eid AND C1.aid 6= C2.aid AND C2.aid 6= C3.aid AND C3.aid 6= C1.aid)

EXCEPT SELECT C4.eid FROM Certified C4, Certified C5, Certified C6, Certified C7, WHERE (C4.eid = C5.eid AND C5.eid = C6.eid AND C6.eid = C7.eid AND C4.aid 6= C5.aid AND C4.aid 6= C6.aid AND C4.aid 6= C7.aid AND C5.aid 6= C6.aid AND C5.aid 6= C7.aid AND C6.aid 6= C7.aid)

11. Find the total amount paid to employees as salaries.

Ans: SELECT SUM (E.salaries) FROM Employees E

SET 3:

The following relations keep track of airline flight information:

Flights(flno: integer, from: string, to: string, distance: integer, departs: time, arrives: time, price: integer)

Aircraft(aid: integer, aname: string, cruisingrange: integer)

Certified(eid: integer, aid: integer)

Employees(eid: integer, ename: string, salary: integer)

1. Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.
2. Find the names of aircraft such that all pilots certified to operate them earn more than 80,000.

Ans: SELECT DISTINCT A.aname FROM Aircraft A

WHERE A.Aid IN (SELECT C.aid FROM Certified C, Employees E

WHERE C.eid = E.eid AND
NOT EXISTS (SELECT * FROM Employees E1
WHERE E1.eid = E.eid
AND E1.salary < 80000))

3. For each pilot who is certified for more than three aircraft, find the eid and the maximum cruising range of the aircraft that he (or she) is certified for.

Ans: . SELECT C.eid, MAX (A.cruisingrange)

FROM Certified C, Aircraft A

WHERE C.aid = A.aid GROUP BY C.eid HAVING COUNT (*) > 3

4. Find the names of pilots whose salary is less than the price of the cheapest route from Los Angeles to Honolulu.

Ans: SELECT DISTINCT E.aname

FROM Employee E

WHERE E.salary < (SELECT MIN (F.price)

FROM Flights F

WHERE F.from = 'LA' AND F.to = 'Honolulu')

5. For all aircraft with cruisingrange over 1,000 miles, find the name of the aircraft and the average salary of all pilots certified for this aircraft.
Ans: SELECT Temp.name, Temp.AvgSalary

FROM (SELECT A.aid, A.aname AS name,

AVG (E.salary)

AS AvgSalary FROM Aircraft A, Certified C, Employes E

WHERE A.aid = C.aid AND C.eid = E.eid

AND A.cruisingrange > 1000

GROUP BY A.aid, A.aname) AS Temp

6.Find the names of pilots certified for some Boeing aircraft.

Ans: SELECT DISTINCT E.ename

FROM Employees E, Certified C, Aircraft A

WHERE E.eid = C.eid

AND C.aid = A.aid

AND A.aname = 'Boeing'

7. Identify the routes that can be piloted by every pilot who makes more than $100,000.

Ans: SELECT DISTINCT F.from, F.to

FROM Flights F

WHERE NOT EXISTS (SELECT * FROM Employees E

WHERE E.salary > 100000

AND NOT EXISTS (SELECT * FROM Aircraft A, Certified C

WHERE A.cruisingrange > F.distance

AND E.eid = C.eid AND A.eid = C.aid))

8. Print the enames of pilots who can operate planes with cruising range greater than 3,000 miles, but are not certified on any Boeing aircraft.

Ans: SELECT DISTINCT E.ename

FROM Employees E, Certified C, Aircraft A

WHERE C.eid = E.eid AND C.aid = A.aid

AND A.cruisingrange > 3000 AND E.eid

NOT IN (SELECT C1.eid

FROM Certified C1, Aircraft A1

WHERE C1.aid = A1.aid

AND A1.aname = 'Boeing')

9. Compute the difference between the average salary of a pilot and the average salary of all employees (including pilots).

Ans: SELECT Temp1.avg - Temp2.avg

FROM (SELECT AVG (E.salary) AS avg

FROM Employees E

WHERE E.eid IN (SELECT DISTINCT C.eid

FROM Certified C))

AS Temp1, (SELECTAVG (E1.salary) AS avg

FROM Employees E1) AS Temp2

10. Print the name and salary of every nonpilot whose salary is more than the average salary for pilots.

Ans: SELECT E.ename, E.salary

FROM Employees E

WHERE E.eid NOT IN (SELECT DISTINCT C.eid

FROM Certified C)

AND E.salary > (SELECT AVG (E1.salary)

FROM Employees E1

WHERE E1.eid IN (SELECT DISTINCT C1.eid

FROM Certified C1))

Set 4

Consider the following relational schema and briefly answer the questions that follow:

Emp(eid: integer, ename: string, age: integer, salary: real)

Works(eid: integer, did: integer, pct time: integer)

Dept(did: integer, budget: real, managerid: integer)

1. Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.

2. **How to get 3 Highest salaries records from Employee table?**

Ans: *select distinct salary from employee a where 3 >= (select count(distinct salary) from employee b where a.salary <= b.salary) order by a.salary desc;*

3. **Count the totalsa deptno wise where more than 2 employees exist.**
   SELECT deptno, sum(sal) As totalsal
   FROM emp
   GROUP BY deptno
   HAVING COUNT(empno) > 2

4. **Find the 3rd MIN salary in the emp table.**
   select distinct sal from emp e1 where 3 = (select count(distinct sal) from emp e2where e1.sal >= e2.sal);

5. **How can you find duplicate records in Employee table?**

   SELECT EMPID,EMPNAME, SALARY, COUNT(*) **AS** CNT
   FROM EMPLOYEE
   GROUP BY EMPID,EMPNAME, SALARY
   HAVING COUNT(*)>1

6. **List the empno, ename, sal, did, exp, ann sal of emps working for dept 20 or 10.**
   Select empno, ename, sal, sal*12 AnnSal, did,
   months_between(sysdate,hiredate)/12 Exp from emp, dept where
   emp.deptno in(10,20) and emp.deptno=dept.deptno

7. **List the name of dept where highest no of emps are working**
   select dname, emp.deptno, count(empno) from emp, dept
   where emp.deptno = dept.deptno having count(empno) =
   (select max(count(empno)) from emp group by deptno)
   group by emp.deptno, dname ;

8. **List the name of the dept where more than avg. no of emps are working**
   select dname, dept.deptno, count(empno) from emp2, dept
   where emp2.deptno in (select deptno from emp group by emp.deptno)
   and emp2.deptno = dept.deptno group by dept.deptno, dname
   having count(empno) >= (select count(deptno) from dept) ;

9. **Find the highest paid employee of sales dept.**
   Select * from emp where sal = (select Max(sal) from emp,dept where
   dname='SALES' and emp.deptno = dept.deptno) ;

10. **List the names of emps who are getting the highest salary dept wise.**
    Select ename, job, sal, dname from emp, dept
    where emp.deptno=dept.deptno and emp.deptno in
    (select distinct deptno from emp group by emp.deptno)
    and sal in (select max(sal) from emp group by deptno) ;

Set 5

Consider the following relations:

Student(snum: integer, sname: string, major: string, level: string, age: integer)

Class(name: string, meets at: time, room: string, fid: integer)

Enrolled(snum: integer, cname: string)

Faculty(fid: integer, fname: string, deptid: integer)

1. Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.

2. **How to find count of duplicate rows? (95% asked in SQL queries for Interviews)**
Answer:
Select rollno, count (rollno) from Student

Group by rollno

Having count (rollno)>1

Order by count (rollno) desc;

3. **How can you DELETE DUPLICATE RECORDS?**

Using row count to restrict delete only 1 record
set rowcount 1
DELETE FROM EMPLOYEE **WHERE** EMPID IN (
SELECT EMPID
FROM EMPLOYEE
GROUP BY EMPID,EMPNAME, SALARY
HAVING COUNT(*)>1) **set** rowcount 0

Set 6:

Employee(empid, first_name, Last_name, joining date,dept)

Incentives(emp_refid, incentive date, incentive amount)

1. Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.

2. **Select first 3 characters of FIRST_NAME from EMPLOYEE**

select substring(FIRST_NAME,1,3) from employee

3. Get employee details from employee table whose first name starts with 'J' and name contains 4 letters

Select * from EMPLOYEE where FIRST_NAME like 'J___' (Underscores)

4.Get department,no of employees in a department,total salary with respect to a department from employee table order by total salary descending

> Select DEPARTMENT,count(FIRST_NAME),sum(SALARY) Total_Salary from employee group by DEPARTMENT order by Total_Salary descending

5.Select department,total salary with respect to a department from employee table where total salary greater than 800000 order by Total_Salary descending

> Select DEPARTMENT,sum(SALARY) Total_Salary from employee group by DEPARTMENT having sum(SALARY) >800000 order by Total_Salary desc

6.Get Employee ID's of those employees who didn't receive incentives without using sub query ?

> select EMPLOYEE_ID from EMPLOYEE
> MINUS
> select EMPLOYEE_REF_ID from INCENTIVES

7.Write a query to rank employees based on their incentives for a month

select FIRST_NAME,INCENTIVE_AMOUNT,DENSE_RANK() OVER (PARTITION BY INCENTIVE_DATE ORDER BY INCENTIVE_AMOUNT DESC) AS Rank from EMPLOYEE a, INCENTIVES b where a.EMPLOYEE_ID=b.EMPLOYEE_REF_ID

8.Select max incentive with respect to employee from employee and incentives table using sub query

select DEPARTMENT,(select IFNULL (max(INCENTIVE_AMOUNT),0)
from INCENTIVES where EMPLOYEE_REF_ID=EMPLOYEE_ID)
Max_incentive from EMPLOYEE

9. List the enames who are retiring after '31-DEC-89' the max job period is
20Y

Select empno, ename, hiredate, sysdate,
months_between(sysdate,hiredate)/12 Exp from emp
where months_between(sysdate,hiredate)/12 > 20
order by hiredate ;

**10.List first 50% of chars of ename in lower case and remaining are
upper case.**
select ename, lower(substr(ename,1,length(ename)/2)),
upper(substr(ename,(length(ename)/2)+1,length(ename))) from emp ;

SET 6

1. Create the table Employee and Department with following details and populate them accordingly with all necessary constraints.

EMP_NO	ENAME	JOB	MGR	HIRE_DATE	SALARY	COMM	DEPT_NO
7369	SMITH	CLERK	7902	17-DEC=80	8000		20
7499	ALLEN	SALESMAN	7698	20-FEB-81	16000	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	12500	500	30
7566	JONES	MANAGER	7839	2-APR-81	29750		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	12500	1400	30
7698	BLAKE	MANAGER	7839	1-MAY-81	28500		30
7782	CLARK	MANAGER	7839	9-JUN-81	24500		10
7788	SCOTT	ANALYST	7566	9-DEC-82	30000		20
7839	KING	PRESIDENT		17-NOV-81	50000		10
7844	TURNER	SALESAMAN	7698	8-SEP-81	15000	0	30
7876	ADAMS	CLERK	7788	12-JAN-83	11000		20
7900	JAMES	CLERK	7698	3-DEC-81	9500		30
7902	FORD	ANALYST	7566	3-DEC-81	30000		20
7934	MILLER	CLERK	7782	23-JAN-82	13000		10

DEPT_NO	DNAME	LOC
10	ACCOUNTING	NEWYORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

2. Add one more column DOB with respective data types for all the employees.
   Alter Table emps add DOB DATE;
3. Display all the employees with descending order of their depart number and display the top 5 employees.
   Select * from emps order by DEPT_NO Desc Limit 5;
4. List Ename and Emp_no of all the employees whose name start with 'M' and 'T' and with minimum four characters.
   Select Ename,Emp_no from Employee where Ename Like "M___% or Ename Like "T___%";
5. List all the employees who joined before 1982.
   Select * from emps where Year(Hire_date)<1982;
6. List all the employees who joined in any year but donot belong to the month JAN.
   Select * from emps where Month(Hire_date)!=01;
7. List the total information of EMP table along with DNAME and Loc of all the emps Working Under 'ACCOUNTING' & 'RESEARCH' .
   Select * from emps as e,Department d where e.DEPT_NO=d.DEPT_NO and(Dname="Accounting" or Dname="Research");
8. Display the Empno, Ename, Sal, Dname, Loc, Deptno, Job of all emps working at 'DALLAS' or working for SALES dept and whose no is having a digit '6' or '8' in 3rd position in the asc order of Deptno.
   Select Emp_no,Ename,Salary, Dname,Loc,E.DEPT_No,Job from emps e,Department d where e.DEPT_NO=d.DEPT_NO and (Loc="Dallas"orDname="Sales")and (Emp_no Like"__6%" or Emp_no like"___8%")order by E.DEPT_NO Asc;

9. List all the employees whose salaries are more than employee 'CLARK'.
   Select * from emps e1 where e1.Salary>(select e2.Salary from emps e2 where e2.Ename="Clark");

10. List the Emps of Deptno 30 whose Jobs are same as Deptno 20.
    Select e1.Emp_no,e1.ename,e1.job,e1.DEPT_NO from emps e1,emps e2 where e1.DEPT_NO=30 and e2.DEPT_NO=20 and e1.Job=e2.Job;

SET 7:
1. List the Deptno where there are no emps.
   Select d.DEPT_No from Department d where d.DEPT_NO not in(Select distinct(d.DEPT_NO) from Department d,emps e where e.DEPT_NO=d.DEPT_NO);
2. List the emps whose sal is ending with 00 and List the emps who joined in the year 81.
   Select d.DEPT_NO from Department d where year(Hire_date)=1981 and Salary Like"%00";
3. Find out the Job that was filled in the first half of 1983 and same job that was filled during the same period of 1984.
   Select Job from emps where year(Hire_date)=1984 oryear(Hire_date)=1983 and month(Hire_date)<7;
4. Find all the emps who earn the maximum Salary for each job wise in ascending order.
   Select max(Salary),Job from emps group by Job order by Salary asc;
5. List the employee name,Salary and Deptno for each employee who earns a salary greater than the average for their department.
   Select *from emps where Salary>(Select avg(Salary) from emps e where DEPT_NO=e.DEPT_NO)group by DEPT_NO,Salary;
6. Find the name and Job of the emps who earn Max salary and Commission.
   Select Ename,Job from emps where Salary=(Select max(Salary)from emps)or comm=(Select max(comm)from emps);
7. List the Deptno and their average salaries for dept with the average salary less than the averages for all department.
   Select DEPT_NO,avg(Salary)from emps where(Select avg(Salary)From emps)>(Select avg(Salary)from emps group by DEPT_NO)group by DEPT_NO;
8. List the emps who are working for dept 10 or 20 with desgs as clerk or analyst with a sal is either 4 or 5 digits with an exp>8ys but does not belong to mons of mar,apr,sep and working for mgrs.
   Select * from emps where DEPT_NO=10 or DEPT_NO=20 and (Job="Clerk"orJob="Analyst")and (Length(Salary)>3and Length(Salary)<6)and (year(curdate())-(year(Hire_date)!=4 or month(Hire_date)!=9)and mgr is not null;
9. List the mgrs who are senior to SCOTT and who are junior to ALLEN.
   Select Ename from emps where Hire_date<(Select Hire_date from emp where Ename="SCOTT")and Hire_date>(select Hire_date from emps where Ename="Allen");

SET 8

1. Display the employees those are having four chars and third character must be 'r'.
   Select * from emps wher Ename Like '__r_' and char_length(Ename)=4;
2. List the names of depts. Where atleast 3 are working in that department
   Select Dname from Department d where d.DEPT_NO in(Select emps.DEPT_NO
   from emps group by emps.DEPT_NO having count(Emp_n0)>=3);
3. List the emps whose Mgr name is 'Blake' and also with his Manager name
   Select e.Emp_no,e1.Ename,e2.Ename from emps e,emps e1,emps e2 where
   e.mgr=e1.Emp_no and e.Ename="Blake"and e1.mgr=e2.Emp_no.

4. List out the Name, Job, Salary of the emps in the department with the highest
   average salary.
   Select Ename,Job, Salary from emps where Salary in (Select max(Salary) from
   emps group by DEPT_NO)group by DEPT_NO;
5. List the name of the dept where more than average no. of emps are working.
   Select e.DEPT_NO,Dname from emps e,Department d where
   e.DEPT_NO=d.DEPT_NO group by e.DEPT_NO having count(Emp-
   no)>all(Select count(Emp_no) from emps e group by e.DEPT_NO);
6. List the Dname, no of chars of which is = no. of emp's in any other Dept
   Select Dname, char_length(Dname) from Department wher char_length(Dname) in
   (select count(Emp_no) from emps e group by e.DEPT_NO);.
7. List Ename and Emp_no of all the employees whose name end with 'S' or 'N' and
   with atleast three characters.
   Select Ename.Emp_no from emps where(Ename Like'%S' or Ename like'%N')and
   Char_length(Ename)>=3;
8. Display the Empno, Ename, Sal, Dname, Loc, Deptno, Job of all emps working at
   'DALLAS' or working for RESEARCH dept and whose no is having a digit '2'
   or '6' in 3rd position in the asc order of Deptno.
   Select Emp_no,Ename Salary,Dname,Loc,Department.DEPT_No,Job from emps
   e,Department d where e.DEPT_NO=d.DEPT_NO and (Loc="Dallas"or
   Dname="Research")   and
   ((truncate((Emp_no)/10),0))%10=2or(truncate((Emp_no/10),0)%10=6)order   by
   DEPT_NO asc;
9. List the emp name, job, sal and dname except SALESMAN and sort on the basis of
   highest sal.
   Select Ename,Job,Salary,Dname from emps e Department d where
   e.DEPT_NO=d.DEPT_NO and Job!="Salesman"order by Salary Desc;

SET 9

1. List the Empno, Ename, Sal of all emps working for Mgr 7902.
   Select Emp_no,Ename,Salary from emps where Mgr=7902;
2. Display all the employees with descending order of their depart number and display
   the top 3 employees.
   Select Ename from emps order by DEPT_No limit 3;
3. List Ename and Emp_no of all the employees whose name start with 'M' or 'T' and
   with minimum four characters.

Select Ename,Emp_no from emps where Ename LIKE "M___% or LIKE "T___%".

4. Find the highest paid employee of sales department and total number of employees working in the department Accounting.
   a. Select e.Ename,e.Salary,d.Dname from Department d,emps e where e.DEPT_No and d.Dname="SALES" order by e.Salary DESC Limit 1.
   b. Select COUNT(e.Emp_no) From Department d,emps e where e.DEPT_NO=d.DEPT_NO and d.Dname="Accounting";
5. List the details of the senior employee from the employee table.
   Select * from emps order by Hire_date limit 1.
6. Display the average salaries of all the clerks.
   Select avg(salary) from emps where job="Clerk".
7. List the employee in dept 20 whose sal is greater than the average sal 0f dept 10 emps.
   Select * from emps where DEPT_NO=20 and Salary >=(select avg(Salary) from emps where DEPT_NO=10);
8. List the details of the department where maximum number of emps are working.
   Select d.DEPT_NO,d.Dname,d.Dloc from Department d where d.DEPT_NO=(Select e.DEPT_NO from emps e group by DEPT_NO DESC Limit 1);
9. List the employee Name, Job, Annual Salary, deptno, Dept name who earn 300000 a year or who are not CLERKS.
   Select e.Ename,e.job,12*(e.Salary),d.DEPT_NO,d.Dname from emps e,Department d where e.DEPT_NO=d.DEPT_NO and(12*(e.salary)=300000 or e.job!="CLERK");

Set 10

1. Display all the unique job groups in the descending order.
   Select distinct job from emps order by Job Desc;
2. List the Empno, Ename, Sal, Daily sal of all emps in the ascending order of Annsal.
   Select Emp_no,Ename,Salary,Round(Salary/365)as Daily_salary from emps order by Salary;
3. List the emps in the descending order of Designations of those joined after the second half of 1982.
   Select * from emps where Hire_date>=Add_date('1982-01-01',Round(365/2))order by Job Desc;
4. List Ename and Emp_no of all the employees whose name start with 'M' or 'T' and with atleast three characters.
   Select Ename,Emp_no from emps where length(Ename)>=3 and (Ename Like'M%' or Ename Like'T%');
5. List the emps along with their EMP_NO and Daily Sal is between Rs.1000 and Rs.2000.
   Select Ename,Emp_no,Salary/365 as Daily_salary from empshaving Daily_salary Between 1000 and 2000;
6. List the emps whose Sal is four digit number ending with Zero.
   Select * from emps where length(salary)=4 and (salary mod 10)=0;

7. Find the total annual sal to distribute job wise in the year 82.
Select Job,Sum(Salary)as Total_salary from emps where year(Hire_date)<=1982 group by Job;
8. List the total information of EMP table along with DNAME and Loc of all the emps Working Under 'SALES' & 'ACCOUNTING'.
Select *from emps e ,Department d where d.Dname in("Sales","Accounting")and e.DEPT_NO=d.DEPT_NO;
9. Display the Empno, Ename, Sal, Dname, Loc, Deptno, Job of all emps working at 'NEWYORK' or working for RESEARCH dept and whose no is having a digit '0' or '6' in 3rd position in the asc order of Deptno.
Select   Emp_no,Ename,Salary,Dname,Loc,d.DEPT_NO,Job   from   emps   e Department   d   where   (d.Dname="Research"   or   d.Loc="New   York")and Substr(e.Emp_no,3,1)in   (0,6)and   e.DEPT_NO=d.DEPT_NO   order   by d.DEPT_NO;