SQL Questions and Solutions (Model QP)

MQP 1 – Q4 (c)

(c)	Consider the following relation schema Works(Pname,Cname,salary) Lives(Pname,Street,City) located in (Cname, city) Manager(Pname,Mgrname) Write the SQL queries for the following i) Find the names of all persons who live in the city Bangalore. ii) Retrieve the names of all person of "Infosys" whose salary is between Rs .50000 iii)Find the names of all persons who lives and work in the same city iv)List the names of the people who work for "Tech M" along with the cities they live in. v)Find the average salary of "Infosys" persons

- Find the names of all persons who live in the city Bangalore

SELECT PNAME FROM Lives WHERE City = “Bangalore”;

- Retrieve the names of all person of "Infosys" whose salary is between Rs .50000

SELECT PNAME FROM Works WHERE Cname = “Infosys” and salary <50000;

OR

SELECT PNAME FROM Works WHERE Cname = “Infosys” and salary BETWEEN 0 AND 50000;

- Find the names of all persons who lives and work in the same city.

SELECT L.Pname

FROM Lives L, Works W, located_in LI

WHERE L.Pname=W.Pname and W.Cname=LI.Cname and L.City=LI.city;

- List the names of the people who work for “Tech M” along with the cities they live in.

```
SELECT L.Pname, L.City
FROM Lives L, Works W
WHERE L.Pname=W.Pname and W.Cname=“Tech M”;
```

- Find the average salary of “Infosys” persons.

```
SELECT AVG(salary)
FROM Works W
WHERE Cname = “Infosys”;
```

MQP 1 – Q5 (c)

(c)	Consider the following COMPANY database(10 marks) EMP(Name,SSN,Salary,SuperSSN,Dno) DEPT(DNum,Dname,MgrSSN,Dno) DEPT_LOC(Dnum,Dlocation) DEPENDENT(ESSN,Dep_name,Sex) WORKS_ON(ESSN,Pno,Hours) PROJECT(Pname,Pnumber,Plocation,Dnum) Write the **SQL** queries for the following i) Retrieve the name of the employee who works with same department as ravi ii)Retrieve the number of dependents for an employee "Ravi" iii)Retrieve the name of the managers working in location "DELHI"who has no female dependents iv)List female employees from Dno=20 earning more than 50000 v)List "CSE" department details

- Retrieve the name of the employee who works with same department as ravi.

```
SELECT Name
FROM EMP
WHERE Dno In (SELECT Dno FROM EMP WHERE Name=“Ravi”);
```

- Retrieve the number of dependents for an employee “Ravi”

```
SELECT Count(*)
FROM EMP E, DEPENDENT D
WHERE E.SSN=D.ESSN and Name=“Ravi”;
```

- Retrieve the name of the managers working in location “DELHI” who has no female dependents.

(SELECT E.SSN FROM EMP E, DEPT D, DEPT_LOC DL WHERE E.SSN=D.MgrSsn AND D.DNum=DL.Dnum AND DL.Dlocation=’DELHI’) MINUS (SELECT E.SSN FROM EMP E, DEPENDENT D WHERE E.SSN=D.ESSN AND D.Sex=’F’);

- List female employees from Dno=20 earning more than 50000

SELECT Fname, Lname FROM EMP WHERE Dno=20 AND Salary>50000 AND Sex=’F’;

- List “CSE” department details

SELECT * FROM DEPT WHERE Dname = “CSE”;

MQP 2 – Q5 (a)

Q.5 **(a)** By refereeing the following Database schema.

Employee(Fname, Minit, Lname, SSN, Bdate, Address, Sex, Salary, Sup_SSN,Dno)
Department(Dname, Dnumber, Mgr_SSN, Mgr_Start_date)
Dept_Locations(Dnumber, Dlocation)
Project(Pname, Pnumber, Plocation, Dnum)
Works_On(Essn, Pno, Hours)
Dependent (Essn, Dependent_Name, Sex, Bdate, Relationship)

Write the SQL Queries for the following

(i). Retrieve the name and address of all employees who work for the 'Research' department.
(ii). Make a list of all project numbers for projects that involve an employee whose last name is 'Smith', either as a worker or as a manager of the department that controls the project.
(iii). List the names of managers who have at least one dependent.
(iv). Find the sum of the salaries of all employees, the maximum salary, the minimum salary, and the average salary.
(v). For each project, retrieve the project number, the project name, and the number of employees who work on that project.

- Retrieve the name and address of all employees who work for the ‘Research’ department.

```
SELECT Fname, Lname, Address FROM Employee E, Department D
WHERE E.Dno = D.Dnumber AND D.Dname = ‘Research’;
```

- Make a list of all project numbers for projects that involve an employee whose last name is ‘Smith’, either as a worker or as a manager of the department that controls the project.

```
(SELECT Pno FROM Project P, Department D, Employee E WHERE P.Dnum=D.Dnumber AND E.SSN=D.Mgr_SSN AND E.Lname='Smith') UNION (SELECT Pno FROM Employee E,Works_On W WHERE E.SSN=W.Essn AND E.Lname=‘Smith');
```

- List the names of managers who have at least one dependent.

SELECT E.Fname, E.Minit, E.Lname FROM Employee E, Department D WHERE E.SSN=D.Mgr_SSN AND E.SSN IN (SELECT Distinct Essn FROM Dependent);

- Find the sum of the salaries of all employees, the maximum salary, the minimum salary, and the average salary.

SELECT Sum(Salary), Max(Salary), Min(Salary), Avg(Salary)

FROM Employee;

- For each project, retrieve the project number, the project name, and the number of employees who work on that project.

SELECT P.Pnumber, P.Pname, COUNT(Essn) FROM Project P, Works_On W WHERE P.Pnumber=W.Pno GROUP BY P.Pnumber, P.Pname;