Q1. 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)
The key fields are underlined, and the domain of each field is listed after the field name. Therefore, Sid is the key for Suppliers, pid is the key for Parts, and sid and pid together form the key for Catalog. The Catalog relation lists the prices charged for parts by Suppliers.

Write the following queries in SQL
l. Find the names of suppliers who supply some red part.
2. Find the sids of suppliers who supply some red or green part.
3. Find the sids Of suppliers who supply some red part or are at 221 Packer Street.

Q2. Solve below the given SQL query for the given table:

Customer (customer name, customer street, customer city)

Loan (loan_number, branch _ name, amount)

Account (account_number, branch_name, balance)

Borrower (customer_name, loan number)

Depositor (customer_name, account number)

1. Find loan numbers of loan account at branch 'Andheri'.

2. Find details of customer's who lives in city 'Mumbai'.

3. Find account numbers having balance between 10000 and 50000.

4. Find name of customer's who has account at branch 'Vile Parle'

Q3. Solve below the given SQL query for the given table:

Course (course-no, title)

Offering (course-no, off-no, off-date, location)

Teacher (course-no, off-no, emp-no)

Enrolment (course-no, off-no, stub-no, grade)

Employee (emp-no, emp-name, job)

Student (stub-no, stub-name, ph-no)

i) List all the teachers who conduct the course titled 'Database Management Systems'

ii) List all courses offered in 'Thane' on 15/8/17

iii) Find the course/s enrolled by 'Radha'.

iv) List all the employees who work as Teachers.

Q4. Person (driver-id, name, address)

Car (model-no, year, color)

Accident (report-number. date, location)

Owns (driver-id, driver name, license, issuing-date not null)

Participated (driver-id, license, report-number, damage, amount)

Write the SQL Query:

a. Find those driver names having third last character is u and lives in Mumbai

b. Find the id and name of those drivers who got the license on the same date as Jini got the license.

c. Find the total number of accidents occurred for each location.

d. Find the driver's name who got the insurance amount of Rs. 20,000 after the accident.

Q5. Solve below queries using tables given below:

Student (StdNo, StdFirstName, StdLastName, StdCity, Stdstate, StdZip, StdGPA)

Faculty (FacNo, FacFirstName, FacLastName, FacCity, FacState, FacDept,

FacDesignation, FacSalary)

Offering (OfferNo, CourseNo, OffTerm, OffYear, FacNo)

Course (CourseNo, CourseDescription, CourseCredits)

1. List the course containing the string 'DATA' in the course description.

2. List the offer number, course number and faculty number Of courses which have offering term as 'FALL' and offering year as '2012' or offering term as 'WINTER' and offering year as '2013'.

3. Count total number of students for each grade point.

Q6. Consider the following employee database

Employee (empname , street, city, date of_joining)

Works (empname, company_name, salary)

Company (Company_name , City)

Manages (empname, manager _ name)

Write SQL queries for the following statement:

i) Modify the database so that 'John' now lives in Mumbai.

ii) Give all the employees of 'ABC Corporation' a 10 % rise.

iii) List all the employees who lives in the same cities as their managers.

iv) Find all employees who earn more than average salary of all employees of their company.

Q7. For given relation, solve below queries.

Employee (Empno (primary key), Ename, Eaddress, Ephone_no, Manager _ no (foreign key referring to Empno), Salary, Deptno)

Department (Deptno (primary key), Dname, Dlocation_id)

Location (Dlocation_id, Dlocation_Name)

Project (Project_no, Project_title, Project cost)

Works_on (Empno, Project_no, no of hours _ worked)

(Assumption: One employee works on more than one project)

Project_belongs to (Project _no, Deptno)

Solve queries using SQL

1. Write a query to find details of employee working in a department located at location 'Mumbai'.

2. Write a query to find details of employee who has worked for maximum hours on project 'PI '.

3. Find out project having cost more than 100000 or project number is 1005, 3456, 2345.

4. Write a query to find employee whose name starts with 'H' and has exactly six characters in name and salary greater than 50000.

Q8. BOOKS (Docld, Title, Publisher, Year)

STUDENTS (Stld, StName, Major, Age)

AUTHORS (AName, Address)

Borrows (Docld, Stld, Date)

has-written (Docld, A Name)

describes (Docld, Keyword)

Consider above relations, write SQL queries for the following questions

i) List all students with the books they can borrow.

ii) List all books published by McGraw-Hill before 1990.

iii) List the name of students who are older than 30 and who are not studying CS.

iv) List the title of books written by the author 'Ullman'.

v) Find publishers wise total number of books

vi) List the authors of the books the student 'Smith' has borrowed.

vii) Find the titles of books have both keywords 'database' and 'programming'.

Q9. Explain concept of SQL views with example.