Q. 1 Consider the following schema.

customer (customer-name, customer-street, customer-city)

loan (loan-number, branch-name, amount)

borrower (customer-name, loan-number)

1. Find the customers who are living in ‘Kolhapur’ and having loan between 10000 to 20000.
2. Find the names of customers who live in same city as ‘Smith’.
3. Find all loan number and branch names having loan amount greater than 20000.
4. Find the loan branches starting with ‘k’.
5. Find the customers who have loan in ‘Shahupuri’ branch.
6. Find the average loan amount at each branch.
7. Find all loan numbers that appear in the loan relation with null values for amount.

Q. 2 Consider the following schema.

employee (employee-name, street, city)

works (employee-name, company-name, salary)

company (company-name, company-city)

1. Find employees whose names starts with ‘s’ and having exactly 5 characters.
2. Find the company name of employees having salary more than 40000.
3. Find the salary and street of all employees who are living in ‘Kolhapur’.
4. Find number of employees for each company.
5. Find employee having highest salary.
6. Give all employees of ‘Wipro’ 15% increment.
7. Find the employees who are not working for any company.

Q. 3 Consider the following Schema

department (deptname, building, budget)

course(courseid, title, deptname, credits)

instructor(ID, name, deptname, salary)

1. Find the department whose budget is less than 100000 and course titled ‘DBE’ is taught.
2. Find the titles of courses having credits 4.
3. Find the names of all instructors in the Computer Science department who have salary greater than 30000.
4. Find instructor names and course identifiers for instructors in the Physics department.
5. Find the average salary in each department.
6. Find the departments whose building name starting with ‘C’.
7. Give a 5 percent salary raise to instructors whose salary is less than average salary.

Q. 4 Consider the following schema.

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

1. List in alphabetic order, all customers who have a balance at the Perryridge branch.
2. Find the branches having balance more than 40000 and branch name starts with ‘S’.
3. List entire account relation in ascending order by account number.
4. Find the average, minimum, maximum, total account balance at each branch.
5. Find the number of depositors at each branch.
6. Find those branches’ having average account balance is more than average balance.
7. Pay 5 percent interest on accounts whose balance is greater than average balance.

Q.5 Consider the following Schema

Course(courseid, title, deptname, credits)

Instructor(ID, name, deptname, salary)

Teaches(ID, courseid, secid, semester, year)

1. Find the instructors who teach a course in the Spring 2010 semester.
2. Find the titles of all courses whose title includes the substring ‘DB’.”
3. List in alphabetic order all instructors who are working in the Physics or CSE department.
4. List the entire instructor relation in descending order of salary.
5. Find the average salary in each department.
6. Find the instructor names and titles of courses from ‘CSE’ department.
7. Find the instructor having highest salary.

Q.6 Consider the following schema.

customer (customer-name, customer-street, customer-city)

account (account-number, branch-name, balance )

depositor (customer-name, account-number)

1. Update balance by 5 percent if it is greater than 30000.
2. Find balance of ‘Ram’.
3. Find the names of customers whose names starts with‘s’ letter and contain 5 letters.
4. Delete customers whose city contains substring ‘pur’
5. Find the customers having balance greater than 20000.
6. Find the account numbers of ‘Bawada’ branch.
7. Find the branch that has the highest average balance.

Q.7 Consider the following schema.

employee (employee-name, street, city)

works (employee-name, company-name, salary)

company (company-name, company-city)

1. Find all employees who earn more than each employee of ‘Infosys’.
2. Find the salary of all employees who are working in TCS.
3. Find number of employees for each company.
4. Find the all companies located in every city in which ‘Infosys’ is located.
5. Give all employees of ‘TCS’ 15% increment.
6. Find the employees who work for ‘Infosys’.
7. Find the employees who are not working for any company.

Q.8 Consider the following schema.

customer (customer-name, customer-street, customer-city)

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

1. Find the customers who have account at ‘Perryridge’ branch.
2. Update balance by 5%.
3. Update those accounts whose balance is greater than 10000 by 6%.
4. Find the customers whose street address contains substring ‘main’.
5. Find the balance of customers whose branch name starts with ‘S’.
6. Find the branch that has the highest average balance.
7. Select the names of customers who have a account at the bank, and whose names are neither Smith nor Jones.

Q.9. Consider the following schema.

borrower (customer-name, loan-number)

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

1. Using subquery, find all customers who have both an account and a loan at the Perryridge branch.
2. Find those branches where the average account balance is more than 1200.
3. Find the account numbers of customers whose names starts with ‘s’ letter and contain 5 letters.
4. Find the names of customers having same balance as “Ram”
5. Find the names of customers who have an account, a loan or both at ‘Perryridge’ branch.
6. By using subquery, find the names of customers who have account but not loan.
7. Update account number of “Ram” to 201.

Q.10 Consider the following schema.

loan (loan-number, branch-name, amount)

borrower (customer-name, loan-number)

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

1. Find the account numbers of customers whose names end with ‘r’ letter and contain 5 letters.
2. Find the names of customers having loan from ‘Redwood’ branch and amount falls between 15000 to 25000.
3. Find the names of customers who have an account, a loan or both at ‘Perryridge’ branch.
4. By using subquery, find the names of customers who have account but not loan.
5. By using subquery, find the names of customers who have both account and loan at ‘Perryridge’ branch.
6. Create a view ‘all-customers’ consisting of branch names and the names of customers who have either an account or a loan.
7. Using view ‘all-customers’, list in alphabetic order, the customers of ‘downtown’ branch.

Q. 11 Consider the following schema.

loan (loan-number, branch-name, amount)

borrower (customer-name, loan-number)

branch (branch-name, branch-city, assets)

1. Find the loan amount and customers who have a loan at ‘Perryridge’ branch and amount is less than 1000.
2. Find the customers who have Loan numbers in between ‘111’ and ‘120’ and whose name ends with ‘m’.
3. List entire loan relation in ascending order by loan number.
4. Find the names of all branches that have assets greater than those of at least one branch located in ‘Kolhapur’.
5. Modify branch relation ‘Perryridge’ branch is shifted to ‘Mumbai’.
6. Delete all Loan tuples having amount same as ‘Smith’.
7. Decrement the loan by 5% whose amount is less than average amount.

Q.12 Consider the following schema.

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

branch (branch-name, branch-city, assets)

1. Delete all account tuples at every branch located in ‘Kolhapur’ city.
2. Delete the records of all accounts with balances below the average balance at the bank.
3. Find the average, minimum, maximum, total account balance at each branch.
4. Find the number of depositors at each branch.
5. Find those branches where average account balance is more than 1200.
6. Find the branch that has highest average balance.
7. Find the customers who have account at ‘downtown’ branch and balance more than 5000.

Q. 13 Consider the following schema.

employee (employee-name, street, city)

works (employee-name, company-name, salary)

company (company-name, company-city)

1. Find the company that has most employees.
2. Find the all companies located in every city in which ‘Small Bank Corporation’ is located.
3. Give all employees of ‘Small Bank Corporation’ 15% increment.
4. Find the employees who do not work for ‘First Bank Corporation’.
5. Find all the employees who earn more than every employee of ‘Small Bank Corporation’.
6. Create a view ‘all-employee’ consisting of company names, their employees and cities of employee.
7. Using view ‘all-employee’ find all employees of ‘DYP’ company.

Q.14 Consider the following schema.

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

branch(branch-name, branch-city, assets)

1. Find the average, minimum, maximum, total account balance at each branch.
2. Find the number of depositors at each branch.
3. Find those branches where average account balance is more than 1200.
4. Find the customers who have account at ‘downtown’ branch and balance more than 5000.
5. Find the branches located in ‘Kolhapur’.
6. Find the names of all branches that have assets greater than each branch located in Kolhapur.
7. Find the customer having highest balance.

Q.15 Consider the following schema.

instructor (ID, name, dept-name, salary)

section (course-id, sec-id, semester, year, building, room-number, time-slot-id)

1. Find the set of all courses taught either in Fall 2009 or in Spring 2010, or both
2. Find the set of all courses taught in the Fall 2009 as well as in Spring 2010semester
3. Find all courses taught in the Fall 2009 semester but not in the Spring 2010semester
4. Find the average salary in each department.
5. Find those departments where the average salary of the instructors is more than 42,000.
6. Find the instructors with their department names.
7. Find the names of all instructors in the Computer Science department who have salary

greater than 40,000.

Q. 16 Consider the following schema.

employee (employee-name, street, city)

works (employee-name, company-name, salary)

company (company-name, city)

1. Find the all companies located in every city in which ‘Small Bank Corporation’ is located.
2. Give all employees of ‘Small Bank Corporation’ 15% increment.
3. Find the employees who do not work for ‘First Bank Corporation’.
4. Create a view ‘all-employee’ consisting of company names, their employees and cities of employee.
5. Using view ‘all-employee’ find all employees of ‘DYP’ company.
6. Delete records in works relation for employees who work for company located in ‘Kolhapur’.
7. Find the employees who works for company located in ‘Sangli’.

Q. 17 Consider the following Schema

department (deptname, building, budget)

instructor(ID, name, deptname, salary)

1. “Find the names of all departments whose building name includes the substring

‘Watson’.”

1. List in alphabetic order all instructors in the Physics department
2. Find the names of all instructors that have a salary value greater than that of each instructor in the Biology department.
3. Find those departments for which the average salary is greater than or equal to all average salaries.
4. Delete all tuples in the instructorrelation pertaining to instructors in the Finance department.
5. Delete all instructors with a salary between 13,000 and 15,000.
6. Increment salary by 5%.

Q.18 Consider the following Schema

Course(courseid, title, deptname, credits)

Instructor(ID, name, deptname, salary)

Teaches(ID, courseid, secid, semester, year)

1. Find the average salary of instructors in the Computer Science department.
2. Find the number of instructors in each department who teach a course in the Spring 2010 semester
3. Find the number of tuples in the courserelation
4. Find the course identifiers of courses having title of 3 characters.
5. Give a 5 percent salary raise to instructors whose salary is less than average salary.
6. Delete all instructors with a salary between 13,000 and 15,000.
7. Find the average salary of instructors in those departments where the average salary is more than 42,000

Q.19 Consider the following schema.

branch(branch-name, branch-city, assets)

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

1. Find the customer having highest balance.
2. Update those accounts whose balance is greater than average balance by 5%.
3. Update those accounts whose balance is greater than 10000 by 6%
4. Find the total account balance at each branch.
5. Delete account records of ‘Smith’.
6. Find those branches’ having total balance is greater than 20000.
7. Find the names of all branches that have assets greater than all branches located in ‘Kolhapur’.

Q.20. Consider the following schema.

customer (customer-name, customer-street, customer-city)

borrower (customer-name, loan-number)

account (account-number, branch-name, balance)

depositor (customer-name, account-number)

1. Find the customers who have account at ‘Perryridge’ branch and lives in ‘Kolhapur’.
2. Update balance of ‘Smith’ by 5%.
3. Update those accounts whose balance is greater than 10000 by 6%.
4. Find the customers whose street address contains substring ‘main’.
5. Find all customers who have either an account or loan (but not both) at the bank.
6. Delete all account tuples at every branch located in ‘Kolhapur’ city.
7. Delete the records of all accounts with balances below the average balance at the bank.

Q.21. Consider the following schema.

employee (employee-name, street, city)

works (employee-name, company-name, salary)

company (company-name, company-city)

1. Find the names of companies located in ‘Kolhapur’.
2. Find the names and city of employees who work for ‘First Bank Corporation’ and earn more than 10000.
3. Find all employees who are living in same city as ‘Ram’.
4. If employee’s salary greater than 10000 then give 10% increment in salary.
5. Find the company that has less than 4 employees.
6. Find the employees having salary more than the average salary.
7. Find the names of employees who are not working in company.

Q.22. Consider the following schema.

account (account-number, branch-name, balance )

depositor (customer-name, account-number)

branch (branch-name, branch-city, assets)

1. Find the average, minimum, maximum, total account balance at each branch.
2. Find the number of depositors at each branch.
3. Find those branches where average account balance is more than 1200.
4. Delete account of ‘Jones’.
5. Find the customers who have account at ‘downtown’ branch and balance more than 5000.
6. Find the customers who have account at all branches located in ‘Kolhapur’.
7. Find the customers who have account at branch having maximum assets.

Q.23 Consider the following schema.

customer (customer-name, customer-street, customer-city)

loan (loan-number, branch-name, amount)

borrower (customer-name, loan-number)

1. Find the names of customers who have loan at ‘Bawada’ branch.
2. Find the names of customers who live in same city as ‘Smith’.
3. Delete all loan numbers for loans made at ‘Perryridge’ branch.
4. Find the names of all branches with customers who have a loan and who live in ‘Kolhapur’.
5. Find customer having maximum loan.
6. List in alphabetical order all customers who have loan amount is less than 10000.
7. Decrement all loans by 5%.

Q.24. Consider the following schema.

employee (employee-name, street, city)

works (employee-name, company-name, salary)

company (company-name, company-city)

1. Find the names of employees who work for any company located in ‘Kolhapur’.
2. Find the names and city of employees who work for ‘TCS’ and earn more than 10000.
3. Find all employees who are living in same city of Ram.
4. If employee’s salary greater than 10000 then give 10% increment in salary.
5. Find the company that has smallest payroll (minimum salary).
6. Find those companies whose employees earn a higher salary than the average salary at ‘INFOSYS.
7. Find maximum salary at each company.

Q.25. Consider the following schema.

loan (loan-number, branch-name, amount)

borrower (customer-name, loan-number)

1. Find all customers having either a loan, an account or both at the bank.
2. List in alphabetic order, customers who have loan at ‘Perryridge’ branch.
3. Find the customers that have loan amount null.
4. Delete all loans with loan amounts less than loan of ‘Ram’.
5. Delete the records of all loans with amount less than the average amount at the bank.
6. Delete all loans of ‘Smith’.
7. Find those branches that have total amount greater 15000.