1) Consider the relation employee (emp\_id,e\_name,salary ,Date of Joining,Dapt\_no,Designation) perform basic SQL operations.

1. Create table employee.
2. Insert 10 records in table.
3. Create a view emp\_vl of table employee which has emp\_id , name and dept-attributes.
4. Create view of table.
5. Update dept of any employee in view. Check whether it gets updated or not.
6. Create emp\_id as primary key and show indices on table employee.
7. Show indices on table.
8. Create user defined index on any column.

2) Consider the relation employee (emp\_id,e\_name,salary ,Date of Joining,Dapt\_no,Designation) perform basic SQL operations.

1. Display employees whose name contains letter ‘e’.
2. Display different types of designation
3. Display name and salary of employee whose location is Mumbai
4. Display name and department of employee working in Manager or Marketing department
5. Display the department name whose employees are more than one
6. Rename employee table as emp1
7. Add a new column city in the employee table.

3)Consider the relation employee(emp\_id,e\_name,salary ,Date of Joining,Dapt\_no,Designation) perform basic SQL operations.

1. Find department in which maximum employees work.
2. Display name, designation and department no of employees whose name starts with either ‘A’ or ‘P’.
3. Display max. salary from department 2 and min. salary from department 4.
4. Display employee data where salary is less than average salary from department 3.
5. Display employees who were hired earliest or latest.
6. Display name and department no of employees who are manager, market analysts. Use prediactes
7. List employees hired in August.
8. List employees who are hired after 31/12/2006.
9. Find average annual salary per department.

4)Consider two tables Customer(c\_id, c\_name , email , city , pincode)Order(order\_id , date , amount , cust\_id.

1. Create both the tables with primary key and foreign key constraints.
2. insert 10 records each.
3. Find all orders placed by customers with cust\_id 2
4. Find list of customers who placed their order and details of order
5. List of customers who haven’t placed order
6. List all orders and append to customer table
7. Display all records
8. Display customer that are from same city8

5) Consider tables Borrower (RollNo, Name, DateofIssue, NameofBook, Status) and

Fine (Roll\_no,Date,Amt). Status is either Issued or Returned.

1. Create both the tables with primary key.

2. Insert 10 records each.

3. Find count of books with Issued status.

4. Display all records.

5. Display RollNo whose date of issue is same.

6) Consider student (roll\_no, name, marks, class) table. Column roll\_no is primary key. Perform any 3 DLL and any 3 DML operations on the table.

**7)** Write a SQL statement to create a table job\_history including columns employee\_id, start\_date, end\_date, job\_id and department\_id and make sure that, the employee\_id column does not contain any duplicate value at the time of insertion and the foreign key column job\_id contain only those values which are exists in the jobs table. Consider table Job (job\_id,job\_title.min\_sal,max\_sal)

8) For the given relation schema: employee(employee-name, street, city)

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

company (company-name, city)

manages (employee-name, manager-name)

Give an expression in SQL for each of the following queries:

1. Find the names, street address, and cities of residence for all employees who work for same company and earn more than $10,000.

Ans :

select e.employee\_name, e.street, e.city, w.company\_name

from employee e

inner join works w

on (e.employee\_name = w.employee\_name)

order by w.company\_name;

+---------------+--------------+-------------+--------------+

| employee\_name | street | city | company\_name |

+---------------+--------------+-------------+--------------+

| David Brown | 101 Pine St | Chicago | FinanceInc |

| Alice Smith | 123 Maple St | New York | TechCorp |

| Charlie Lee | 789 Oak St | New York | TechCorp |

| Bob Johnson | 456 Elm St | Los Angeles | WebSolutions |

| Eve Davis | 202 Birch St | New York | WebSolutions |

+---------------+--------------+-------------+--------------+

1. Find the names of all employees in the database who live in the same cities as the companies for which they work.

Ans :

select e.employee\_name

from employee e

inner join (select \* from works

where salary >= 10000) as w

on (e.employee\_name = w.employee\_name);

+---------------+

| employee\_name |

+---------------+

| Alice Smith |

| Charlie Lee |

| Eve Davis |

+---------------+

1. 3 rows in set (0.00 sec)Find the names of all employees who earn more than the average salary of all employees of their company. Assume that all people work for at most one company.

Ans :

(Without Join)

select e.employee\_name

from employee e, works w, company c

where e.employee\_name = w.employee\_name AND w.company\_name = c.company\_name AND

w.salary >= (select AVG(w1.salary) from works w1 where w1.company\_name = w.company\_name);

+---------------+

| employee\_name |

+---------------+

| David Brown |

| Charlie Lee |

| Eve Davis |

+---------------+

3 rows in set (0.0)

(With join)

SELECT e.employee\_name

FROM employee e

JOIN works w ON e.employee\_name = w.employee\_name

JOIN company c ON w.company\_name = c.company\_name

WHERE w.salary >= (SELECT AVG(w1.salary) FROM works w1 WHERE w1.company\_name = w.company\_name);

+---------------+

| employee\_name |

+---------------+

| David Brown |

| Charlie Lee |

| Eve Davis |

+---------------+

3 rows in set (0.00 sec)

9) For the given relation schema: employee(empoyee-name, street, city)

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

company (company-name, city)

manages (employee-name, manager-name)

Give an expression in SQL for each of the following queries:

1. Find the name of the company that has the smallest payroll.
2. Find the names of all employees in the database who live in the same cities and on the same streets as do their managers.

10) Implement CRUD operations. SAVE method. Use following Collection. Perform Map Reduce to count quantity of each item.

Item: Item ID, Item quantity, price, brand.

11) Implement CRUD operations. SAVE method. Use following Collection.

Item: Item ID, Item quantity, price, brand.

12) Implement CRUD operations. SAVE method. Use following Collection.

Item: Item ID, Item quantity, price, brand, discount

1. Display the count of item brand wise.

2. Dsiplay item with minimum price.

3. Display maximum discount given for item.

13) Implement Map reduces operation for counting the marks of students.

Use: student (roll\_no, name marks, class)

Expected output: student name or roll no and total marks.

14) Implement Map reduces operation for displaying persons with same profession.

Use: person (person\_id, name, addr, profession)

15) Perform CRUD operation in mongo db –

Use : person( person\_id, name, addr, profession )

1.Create Collection.

2.Inserting data in collection.

3.Reading data of collection.

4.Updating data of collection.

5.Deleting data from collection.

16) Perform CRUD operation and Aggregation in mongo db

employee(emp\_id,e\_name,salary ,Date of Joining,Dapt\_no,Designation)

1. Display the count of employee department wise.

2. Dsiplay the average salary of employee in sales department.

3. Dsiplay minimum salary to employees joins in June 2016

4. Display maximum salary given to employee in production department.

5. Display record of first and last employee department wise.

17) Consider student ( roll\_no, name ,marks, class) table. Perform add update and delete operation on same table through java program. Write menu driven program.

18) Implement Stored Procedure namely proc\_Grade for the categorization of student. If marks scored by students in examination is <=1500 and marks>=990 then student will be placed in distinction category if marks scored are between 989 and900 category is first class, if marks 899 and 825 category is Higher Second Class. Write a PL/SQL block for using procedure created with above requirement. Stud\_Marks(name, total\_marks) Result(Roll,Name, Class).

19) Write a database trigger on customer( cust\_id, c\_name, addr) table. The System should keep track of the records that are being updated or deleted. The old value of updated or deleted records should be added in cust\_Audit table.

20) Implement a database trigger on client\_master( c\_id, c\_name, acc\_no) table. The System should keep track of the records that are being updated or inserted. The old value of updated or deleted records should be added in client\_Audit table.

21) Implement a PL/SQL block of code using explicit Cursor, that will merge the data available in the newly created table N\_RollCall with the data available in the table O\_RollCall. If the data in the first table already exist in the second table then that data should be skipped.

22) Write a PL/SQL block of code for the following requirements:- Schema: Borrower(Rollin, Name, DateofIssue, NameofBook, Status) 2. Fine(Roll\_no,Date,Amt) • Accept roll\_no & name of book from user. • Check the number of days (from date of issue), if days are between 15 to 30 then fine amount will be Rs 5per day. If condition of fine is true, then details will be stored into fine table.

23) Implement Basic SQL queries.

1. Create table employee.

2. Insert 10 records in table.

3. Create a view emp\_vl of table employee which has emp\_id , name and dept-attributes.

4. Display name and department of employee working in Manager or Marketing department

5. Display employees who were hired earliest or latest.

6. Display name and department no of employees who are manager, market analysts. Use

Predicates

List employees hired in August.

List employees who are hired after 31/12/2006.

24) ) Indexing and join: Consider the relation

employee (emp\_id,e\_name,salary ,Date of Joining,Dapt\_no,Designation)

Customer(c\_id, c\_name , email , city , pincode)Order(order\_id , date , amount , cust\_id.

a. create empid as primary key and indices on table employee.

b. create user defined index on any column

c. create sequence using auo-increment.

d. truncate table.

e. find list of customers who placed order and details of their orders.

f. find info of customers and append order details to the table/

g. list down customers who haven’t placed order.

25) Implement aggregation and indexing with suitable example in mongodb.