

1.

Design and Develop at list 10 SQL DDL statements which demonstrate the use of SQL objects such as Table, View, Index, Sequence.

Primary key, foreign keys, unique, not null, null constraints whenever necessary.

- 1) Create table Department with fieldsdeptno, dname, location.
- 2) Insert the following records by using any one method

Deptno	Dname	Location
10	Accounting	Mumbai
20	Research	Pune
30	Sales	Nashik
40	Operations	Nagpur

- 3) List the department information.
- 4) Create table employee as shown below.

Empno	Ename	Job	Mgr	Joined_date	Salary	Commissio n	Dept no	Address
1001	Nileshjoshi	Clerk	1005	17-dec-95	2800	600	20	Nashik
1002	Avinashpaw ar	Sales man	1003	20-feb-96	5000	1200	30	Nagpur
1003	Amit kumar	Mana ger	1004	2-apr-86	2000	----	30	Pune
1004	Nitinkulkar ni	Presid ent	--	19-apr-86	50000	----	10	Mumbai
1005	Niraj Sharma	Analy st	1003	3-dec-98	12000	----	20	Satara
1006	Pushkardes hpande	Sales man	1003	1-sep-96	6500	1500	30	Pune
1007	Sumitpatil	Mana ger	1004	1-may-91	25000	----	20	Mumbai
1008	Ravi sawant	Analy st	1007	17-nov-95	10000	----	---	Amaravati

- 5) Write a query to display employee information. Write a name of column explicitly.
- 6) Create a query to display unique jobs from the table.
- 7) Change the location of dept40 toBanglore instead of Nagpur.
- 8) Change the name of the employees 1003 to Nikhil Gosavi.
- 9) Delete Pushkardeshpande from employee table.
- 10) Create a table department_temp table from deptarment table, only create the structure not content.
- 11) Create view, index , sequence
- 12) Insert rows into department_temp table from deptarment table
- 13) Display the list of employee whose salary between 5000 and 20000.
- 14) Display the list of employee excluding job title as 'salesman'.

2.

Design at least 10 SQL queries for suitable database application using SQL DML statements: Insert, Select, Update, Delete with operators, functions, and set operator.

Primary key, foreign keys, unique, not null, null constraints whenever necessary.

- 1) Create table Department with fields deptno, dname, location.
- 2) Insert the following records by using any one method

Deptno	Dname	Location
10	Accounting	Mumbai
20	Research	Pune
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40	Operations	Nagpur

- 3) List the department information.
- 4) Create table employee as shown below.

Empno	Ename	Job	Mgr	Joined_date	Salary	Commission	Deptno	Address
1001	Nileshjoshi	Clerk	1005	17-dec-95	2800	600	20	Nashik
1002	Avinashpawar	Salesman	1003	20-feb-96	5000	1200	30	Nagpur
1003	Amit kumar	Manager	1004	2-apr-86	2000	----	30	Pune
1004	Nitinkulkarni	President	--	19-apr-86	50000	----	10	Mumbai
1005	Niraj Sharma	Analyst	1003	3-dec-98	12000	----	20	Satara
1006	Pushkardeshpande	Salesman	1003	1-sep-96	6500	1500	30	Pune
1007	Sumitpatil	Manager	1004	1-may-91	25000	----	20	Mumbai
1008	Ravi sawant	Analyst	1007	17-nov-95	10000	----	---	Amaravati

- 5) Display the name & salary of all employees whose salary not in the range of 5000 & 10000.
- 6) Find all names & joined date of employees whose names starts with 'A'.
- 7) Find all names of employees having 'i' as a second letter in their names.
- 8) Find employee number, name of employees whose commission is not null.
- 9) Display all employee information in the descending order of employee number.
- 10) Display the minimum, maximum, sum & average salary of each job type.
- 11) Write a query to display the number of employee with the same department.
- 12) Select employee number, ename according to the annual salary in ascending order.
- 13) Find the department number, maximum salary where the maximum salary is greater than 5000.
- 14) Find all distinct column values from employee & department table.
- 15) Find all distinct column values present in employee but not in department table.
- 16) Display the number of employees in the department 30 who can earn a commission.
- 17) Change address of empno 1008 to Pune
- 18) Delete a record which is having commission less than 800.

3.

Design SQL queries for suitable database application using SQL DML statements: Sub-Query and View

Use suitable tables. Employee (Emp_id, First_name, Last_name, Salary, Designation, Dept_no).

Department(Dept_No, Dept_Name, Location)

- a) write a SQL query to find those employees who receive a higher salary than the employee with ID 163. Return first name, last name.
- b) write a SQL query to find out which employees have the same designation as the employee whose ID is 169. Return first name, last name, department ID
- c) write a SQL query to find those employees who earn more than the average salary. Return employee ID, first name, last name.
- d) Display a record who has minimum salary
- e) Display a record who has maximum salary
- f) Create view on Department and Employee table.
- g) Create sequence.
- h) Create index on emp_id

Design SQL queries for suitable database application using SQL DML statements: all types of Join.

Salesman(salesman_id, name, city, commission)

Customer(customer_id, cust_name,city,grade,salesman_id)

- 1) write a SQL query to find the salesperson and customer who reside in the same city. Return Salesman, cust_name and city.
- 2) write a SQL query to find salespeople who received commissions of more than 12 percent from the company. Return Customer Name, customer city, Salesman, commission.
- 3) write a SQL query to display the customer name, customer city, grade, salesman name, salesman city. The results should be sorted by ascending customer_id.
- 4) Write a SQL statement to generate a list in ascending order of salespersons who work either for one or more customers or have not yet joined any of the customers.

4,

Unnamed PL/SQL code block: Use of Control structure and Exception handling is mandatory.

- a) Write a PL/SQL program to check whether a number is even or odd.
- b) Write a program in PL/SQL to update the salary of a specific employee by 8%.

Table : Employee (Empid, Ename, Salary, Designation)

OR

Schema: 1. 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 5 per day. • If no. of days > 30, per day fine will be Rs 50 per day & for days less than 30, Rs. 5 per day. • After submitting the book, status will change from I to R. • If condition of fine is true, then details will be stored into fine table

5.

Write a PL/SQL block of code using parameterized 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. Frame the separate problem statement for writing PL/SQL block to implement all types

6.

Write a 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 and 900 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.

1. Stud_Marks(Roll, Name, Total_marks)

2. Result(Roll, Name, Class)

Frame the separate problem statement for writing PL/SQL Stored Procedure and function, inline with above statement. The problem statement should clearly state the requirements

7.

Write a database trigger on Library 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 Library_Audit table. Frame the problem statement for writing Database Triggers of all types, in-line with above statement. The problem statement should clearly state the requirements.

8.

Implement MongoDB Queries using CRUD operations. (Use CRUD operations, SAVE method, logical operators)

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Implement queries for aggregation and indexing with suitable example using MongoDB.

10.

Implement Map reduces operation with suitable example using MongoDB.

11.

Design and Implement any 10 query using MongoDB

12.

Write a program to implement MySQL/MongoDB database connectivity with PHP/python/Java Implement Database navigation operations (add, delete, edit etc.).

13.

- a) Draw ERP diagram for the university database. (Identifying entities, relationships between entities, attributes, keys, cardinalities, generalization, specialization etc.) Convert the ER diagram into relational tables and normalize Relational data model.
- b) Write any 5 DML queries. Create suitable tables.

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- a) Draw ERP diagram for the university database (Identifying entities, relationships between entities, attributes, keys, cardinalities, generalization, specialization etc.) Convert the ER diagram into relational tables and normalize Relational data model.
- b) Write the 5 queries using Order by, Group by and Having clause. Create suitable tables.

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- a) Draw ERP diagram for the Car database. (Identifying entities, relationships between entities, attributes, keys, cardinalities, generalization, specialization etc.) Convert the ER diagram into relational tables and normalize Relational data model.
- b) Write 5 queries for aggregate function. Create suitable tables.

16

Write PL/SQL code to calculate the area of circle for a value of radius varying from 5 to 9. Store the radius and corresponding values of calculated area in empty table named areas, consisting of two columns, radius and area.