**Mid Term Exam**

**Total Marks:100 Date: 12-7-2024**

| **Q.No** | **QUESTIONS** | **Marks** |
| --- | --- | --- |
| 1 | Explain the difference between Primary Key and Foreign Key in SQL. | 5 |
| 2 | What is a Self Join? Provide an example using the employees table to list employees who share the same **manager ID**, showing only their **first name**s and **manager ID**s. | 5 |
| 3 | Create a table of Employees which has the following fields   * 1. Employee\_Id   2. First Name   3. Last Name   4. Date of Birth   5. Department Id   6. Salary   Create a table Projects with the following fields:   1. Project ID 2. Project Name 3. Start Date 4. End Date 5. Budget   Create a table Employee\_Projects with the following fields:   1. Employee ID 2. Project ID   Ensure that each employee can work on multiple projects and a project can have multiple employees. | 20 |
| **Use dummydb in MySQL to answer the following questions:** [**Link**](https://drive.google.com/file/d/1Lkklsw33VSjlRKQ3bxmwIUqGXtfQgJ-r/view?usp=drive_link) | | |
| 4 | Using the dummydb, write an SQL query to get the third-highest salary in the employees table. | 8 |
| 5 | Write a query to show the department names and the number of employees in each department. | 10 |
| 6 | Illustrate INNER JOIN, LEFT JOIN, RIGHT JOIN, and CROSS JOIN with examples using the employees and departments tables. | 14 |
| 7 | What is a Common Table Expression (CTE)? Write an example query using CTE to show the names of employees whose salary is higher than the average salary. | 8 |
| 8 | Write a query to display the names of employees who earn a salary less than the employee "Steven King". | 10 |
| 9 | Write a query to find the department names and the names of the managers for each department. | 10 |
| 10 | Write a query to display the **names of all cities** where **departments are located**. | 10 |