

## Mid Term Exam

Total Marks:100

Date: 8-11-2024

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 <b>manager ID</b> , showing only their <b>first names</b> and <b>manager IDs</b> .	5
3	<p>Create a table of Employees which has the following fields</p> <ul style="list-style-type: none"><li>a. Employee_Id</li><li>b. First Name</li><li>c. Last Name</li><li>d. Date of Birth</li><li>e. Department Id</li><li>f. Salary</li></ul> <p>Create a table Projects with the following fields:</p> <ul style="list-style-type: none"><li>a. Project ID</li><li>b. Project Name</li><li>c. Start Date</li><li>d. End Date</li><li>e. Budget</li></ul> <p>Create a table Employee_Projects with the following fields:</p> <ul style="list-style-type: none"><li>a. Employee ID</li><li>b. Project ID</li></ul> <p>Ensure that each employee can work on multiple projects and a project can have multiple employees.</p>	20
Use dummydb in MySQL to answer the following questions: <a href="#">Link</a>		
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 <b>names of all cities</b> where <b>departments are located</b> .	10

