

**Lab Final Examination: Fall-2024**  
**Course Code: CIS 222L (Batch: 17\_B)**  
**Course Title: Database Management System Lab**  
**Date: 12/12/2024**

**Time: 1 Hour****Total Marks: 40**

Consider a University Enrollment System.

| Student ID | Student Name | Course ID | Course Name | Teacher     | Department | Department Head               |
|------------|--------------|-----------|-------------|-------------|------------|-------------------------------|
| 231-16-001 | Fahim        | CIS 222   | DBMS        | Mr. Mehedi  | CIS        | Md. Sarwar Hossain Mollah     |
| 231-16-001 | Fahim        | CIS122    | DS          | Mr. Himel   | CIS        | Md. Sarwar Hossain Mollah     |
| 231-16-002 | Maruf        | CIS 222   | DBMS        | Mr. Mehedi  | CIS        | Md. Sarwar Hossain Mollah     |
| 231-16-002 | Maruf        | CIS 131   | CAO         | Mr. Israfil | CSE        | Dr. Sheak Rashed Haider Noori |
| 231-16-003 | Parvez       | CIS 313   | AI          | Mr. Mizan   | CSE        | Dr. Sheak Rashed Haider Noori |
| 231-16-004 | Naim         | IoT325    | EDC         | Mr. Nafees  | SWE        | Dr. Imran Mahmud              |

**Final Structure After Normalization (Up to 3NF)**

**Table: Enrollment**

| Student ID | Student Name | Course ID |
|------------|--------------|-----------|
| 231-16-001 | Fahim        | CIS 222   |
| 231-16-001 | Fahim        | CIS122    |
| 231-16-002 | Maruf        | CIS 222   |
| 231-16-002 | Maruf        | CIS 131   |
| 231-16-003 | Parvez       | CIS 313   |
| 231-16-004 | Naim         | IoT325    |

**Table: Departments**

| Department | Department Head               |
|------------|-------------------------------|
| CIS        | Md. Sarwar Hossain Mollah     |
| CSE        | Dr. Sheak Rashed Haider Noori |
| SWE        | Dr. Imran Mahmud              |

Table: Courses

| Course ID | Course Name | Teacher     | Department |
|-----------|-------------|-------------|------------|
| CIS 222   | DBMS        | Mr. Mehedi  | CIS        |
| CIS122    | DS          | Mr. Himel   | CIS        |
| CIS 131   | CAO         | Mr. Israfil | CSE        |
| CIS 313   | AI          | Mr. Mizan   | CSE        |
| IoT325    | EDC         | Mr. Nafees  | SWE        |

### Task 1 – Basic Structure (16 Marks)

---

**Q1.** Create the table and insert data as per the normalized table mentioned above under the “University Enrollment System” database.

### Task 2 –SQL Query (6×4=24 Marks)

---

**Q2.** Find the students whose names have 'r' as the third character.

**Q3.** Count the total number of students

**Q4.** Retrieve the number of courses taught by each teacher

**Q5.** Count the Number of Students Enrolled in Each Course

**Q6.** Find the Course with the Most Enrollments

**Q7.** Find students enrolled in courses with IDs starting with 'CIS'