EAST WEST UNIVERSITY
Department of Computer Science and Engineering
B.Sc. in Computer Science and Engineering Program
Lab Examination, Summer 2024 Semester

Course:	**CSE 302 Database Systems (Section – 2)**
Instructor:	**Mahmuda Rawnak Jahan, Lecturer, CSE Department**
Full Marks:	**25 (10 will be counted for final grading)**
Time:	**1 Hour and 15 Minutes**

Note: Answer ALL the questions.

1. Consider the following "Hospital Management Database" Schema. Marks: 3+1.5+1 = 5.5]

Patients (*patient_id* , *patient_name, gender, admission_date, discharge_date, medical_condition)*
Doctors(*doctor_id, doctor_name, specialization, contact_number*)
Admissions(*admission_id, patient_id, doctor_id*)

Create the necessary tables with the following specifications:

- **A. Table "Patients":**
  - **a. Attributes:** *patient_id (Primary Key), patient_name, gender, admission_date, discharge_date, medical_condition.*
  - **b. Constraints:**
    - i. Add not-null constraints on ***patient_name, gender***.
    - ii. Ensure that ***admission_date*** is not after ***discharge_date***..
- **B. Table "Doctors":**
  - **a. Attributes:** *doctor_id (Primary Key), doctor_name, specialization, contact_number, salary.*
  - **b. Constraints:**
    - i. Add a constraint on ***salary*** to ensure it is greater than or equal to 20,000.
- **C. Table "Admissions":**
  - **a. Attributes:** *admission_id (Primary Key), patient_id (Foreign Key references Patients table), doctor_id (Foreign Key references Doctors table).*

2. Insert the provided sample data to each table: [Marks: 1.5 x 3 = 4.5]

Patients:

patient_id	patient_name	gender	admission_date	discharge_date	medical_condition
101	Muhammad Yunus	Male	2024-04-01	2024-04-10	Flu
102	Taslima Nasrin	Female	2024-04-05	2024-04-12	Fractured Leg
103	Humayun Ahmed	Male	2024-04-11	2024-04-23	Appendicitis
104	Jafor Iqbal	Male	2024-04-08	2024-04-11	Pneumonia

Doctors:

doctor_id	doctor_name	specialization	contact_number	Salary
201	Dr. Jahid	Neurology	01798354011	45000
202	Dr. Kabir	Orthopedics	01997085841	67000
203	Dr. Topu	Cardiology	01844442005	80000
204	Dr. Gitanjali	Neurology	01711910555	90000

Admissions:

admission_id	patient_id	doctor_id
301	101	201
302	102	202
303	103	201
304	104	204

3. Write SQL statements for the following queries: [Marks: 2 x 5 =10]

I. Find the doctor's name with the lowest salary.

II. List the names of doctors who have admitted more patients than the average number of patients admitted by any doctor.

III. Find the details of male doctors whose names contain both 'm' and 'n' and who specialize in Cardiology.

IV. Retrieve the patient(s) name in descending order, who were treated by multiple doctors.

V. Create a view named 'Admission_under_Neurology' containing the names of patients who were admitted by doctors specializing in Neurology.