**Sample SQL Practice Questions**

1. **Retrieve all patient details who have appointments in the last 30 days.**
2. **List doctors with more than 10 years of experience.**
3. **Find the total number of appointments per doctor.**
4. **Get the total revenue generated in the current year.**
5. **List all unpaid bills with patient names and contact numbers.**
6. **Which medicine is prescribed most frequently?**
7. **Which doctor has treated the most patients?**
8. **Show the average cost of treatment by specialty.**
9. **Find all patients who received treatment costing more than ₹5,000.**
10. **List all appointments along with doctor name, patient name, and diagnosis.**

**Patients**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| patient\_id | INT (PK) | Unique ID for each patient |
| name | VARCHAR | Full name of the patient |
| gender | VARCHAR(10) | Gender |
| dob | DATE | Date of Birth |
| contact\_number | VARCHAR | Contact number |
| address | VARCHAR | Patient address |

**Doctors**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| doctor\_id | INT (PK) | Unique ID for each doctor |
| name | VARCHAR | Full name of the doctor |
| specialty | VARCHAR | Medical specialty |
| experience\_years | INT | Years of experience |
| contact\_number | VARCHAR | Contact number |

**Appointments**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| appointment\_id | INT (PK) | Unique ID for each appointment |
| patient\_id | INT (FK) | Linked to Patients |
| doctor\_id | INT (FK) | Linked to Doctors |
| appointment\_date | DATE | Date of the appointment |
| diagnosis | VARCHAR | Preliminary diagnosis |

**Treatments**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| treatment\_id | INT (PK) | Unique ID for treatment |
| appointment\_id | INT (FK) | Linked to Appointments |
| treatment\_desc | TEXT | Description of the treatment given |
| medicine\_given | VARCHAR | Name of medicine |
| cost | DECIMAL | Cost of treatment |

**Billing**

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| bill\_id | INT (PK) | Unique ID for each bill |
| patient\_id | INT (FK) | Linked to Patients |
| total\_amount | DECIMAL | Total amount billed |
| billing\_date | DATE | Date of bill |
| payment\_status | VARCHAR | Paid/Unpaid |

Patient :

INSERT INTO Patients (patient\_id, name, gender, dob, contact\_number, address) VALUES

(1, 'Aarav Sharma', 'Male', '1990-05-14', '9876543210', 'Hyderabad, Telangana'),

(2, 'Priya Verma', 'Female', '1985-09-22', '9123456780', 'Mumbai, Maharashtra'),

(3, 'Rohan Mehta', 'Male', '1992-12-03', '9988776655', 'Bangalore, Karnataka'),

(4, 'Sneha Reddy', 'Female', '2000-07-18', '9012345678', 'Chennai, Tamil Nadu'),

(5, 'Rahul Singh', 'Male', '1978-11-30', '9090909090', 'Delhi, NCR');

Doctors

INSERT INTO Doctors (doctor\_id, name, specialty, experience\_years, contact\_number) VALUES

(1, 'Dr. Neha Kapoor', 'Cardiology', 12, '9811122233'),

(2, 'Dr. Arjun Nair', 'Orthopedics', 9, '9822233445'),

(3, 'Dr. Meena Joshi', 'Dermatology', 15, '9833344556'),

(4, 'Dr. Vikram Das', 'Pediatrics', 7, '9844455667'),

(5, 'Dr. Alok Sen', 'Neurology', 11, '9855566778');

Appointments :

INSERT INTO Appointments (appointment\_id, patient\_id, doctor\_id, appointment\_date, diagnosis) VALUES

(101, 1, 1, '2025-03-01', 'Chest Pain'),

(102, 2, 2, '2025-03-05', 'Knee Pain'),

(103, 3, 3, '2025-03-07', 'Skin Allergy'),

(104, 4, 4, '2025-03-10', 'Fever'),

(105, 5, 5, '2025-03-15', 'Headache');

Treatments :

INSERT INTO Treatments (treatment\_id, appointment\_id, treatment\_desc, medicine\_given, cost) VALUES

(1001, 101, 'ECG and consultation', 'Aspirin', 1500.00),

(1002, 102, 'X-Ray and physiotherapy', 'Ibuprofen', 2200.00),

(1003, 103, 'Topical cream and consultation', 'Cetirizine', 800.00),

(1004, 104, 'Blood test and fever treatment', 'Paracetamol', 1000.00),

(1005, 105, 'MRI scan and neuro consultation', 'Sumatriptan', 6000.00);

Billing :

INSERT INTO Billing (bill\_id, patient\_id, total\_amount, billing\_date, payment\_status) VALUES

(201, 1, 1500.00, '2025-03-02', 'Paid'),

(202, 2, 2200.00, '2025-03-06', 'Paid'),

(203, 3, 800.00, '2025-03-08', 'Unpaid'),

(204, 4, 1000.00, '2025-03-11', 'Paid'),

(205, 5, 6000.00, '2025-03-16', 'Unpaid');