

SQL Micro Course Answer PDF

1. Total Number of Patients

(Write an SQL query to find the total number of patients across all hospitals)

```
SELECT SUM(Patients_count) AS total_patients  
FROM hospital_data;
```

2. Average Number of Doctors per Hospital

(Retrieve the average count of doctors available in each hospital)

```
SELECT AVG(Doctors_Count) AS Avg_Doctors_per_Hospital  
FROM hospital_data;
```

3. Top 3 Departments with the Highest Number of Patients

(Find the top 3 hospital departments that have the highest number of patients)

```
SELECT Department,  
       SUM(Patients_count) AS total_patients  
FROM hospital_data  
GROUP BY Department
```

ORDER BY total_patients DESC

LIMIT 3;

4. Hospital with the Maximum Medical Expenses

(Identify the hospital that recorded the highest medical expenses)

SELECT Hospital_Name,

SUM(Medical_Expenses) AS Max_Medical_Expenses

FROM hospital_data

GROUP BY Hospital_Name

ORDER BY Max_Medical_Expenses DESC

LIMIT 1;

5. Daily Average Medical Expenses

(Calculate the average medical expenses per day for each hospital)

SELECT Hospital_Name,

Admission_Date,

AVG(Medical_Expenses) AS avg_daily_expenses

FROM hospital_data

GROUP BY Hospital_Name, Admission_Date

ORDER BY Hospital_Name, Admission_Date;

6. Longest Hospital Stay

(Find the patient with the longest stay by calculating the difference between Discharge Date and Admission Date)

```
SELECT Hospital_Name,  
        Department,  
        Admission_Date,  
        Discharge_Date,  
        DATEDIFF(Discharge_Date, Admission_Date) AS stay_days  
FROM hospital_data  
ORDER BY stay_days DESC  
LIMIT 1;
```

7. Total Patients Treated Per City

(Count the total number of patients treated in each city)

```
SELECT Location,  
        COUNT(Patients_Count) AS Total_Patients  
FROM hospital_data  
GROUP BY Location  
ORDER BY Total_Patients DESC;
```

8. Average Length of Stay Per Department

(Calculate the average number of days patients spend in each department)

```
SELECT Department,  
  
        AVG(DATEDIFF(Discharge_Date, Admission_Date)) AS Avg_Days  
  
FROM hospital_data  
  
WHERE  
  
    Discharge_Date >= Admission_Date  
  
GROUP BY Department  
  
ORDER BY Avg_Days DESC;
```

9. Identify the Department with the Lowest Number of Patients

(Find the department with the least number of patients)

```
WITH patient_counts AS (  
  
    SELECT Department, COUNT(*) AS total_patients  
  
    FROM hospital_data  
  
    GROUP BY Department  
  
)  
  
SELECT Department, total_patients  
  
FROM patient_counts  
  
WHERE total_patients = (SELECT MIN(total_patients) FROM patient_counts);
```

10. Monthly Medical Expenses Report

(Group the data by month and calculate the total medical expenses for each month)

```
SELECT DATE_FORMAT(Admission_Date, '%Y,%m') AS Month,  
        SUM(Medical_Expenses) AS Total_med_Expenses  
FROM hospital_data  
GROUP BY Month  
ORDER BY Total_med_Expenses;
```