

Sheet No(2)

Prob1:- if the traffic volumes for every day in the weak and for every month in the year are as follow:

Month	Number of vehicles	Day	Number of vehicles
January	415000	Saturday	17000
February	408000	Sunday	18600
March	395000	Monday	17450
April	405000	Tuesday	16900
May	450000	Wednesday	15800
June	500000	Thursday	18400
July	590000	Friday	13500
August	550000		
September	486000		
October	424000		
November	416000		
December	402000		

- Draw the daily volume fluctuation during the weak and the monthly volume fluctuation during the year.
- Determine the ADT and the AADT.
- Obtain the correction factors for every day and every month.

Prob2:- the hourly volumes for 12 hours in a certain day are counted as mentioned in the table:

Counting Time	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
N. of vehicles	1490	1550	1930	1820	1750	1630	1440	1500	1800	1825	2030	1950

- Draw the hourly volume fluctuation during the day.
- If the hourly correction factor for 15-16 hour=1.1 and K value for this section=0.1,
determine the ADT and DHV.

Prob3:- A traffic engineer urgently needs to determine the AADT on a rural primary road. The data collected shown below on a **Tuesday** during the month of May.

Use factors calculated in **prob1** TO Determine the **AADT**.

Counting time	Traffic volume	Expansion factor
7-8	400	29
8-9	535	22.05
9-10	650	18.8
10-11	710	17.1
11-12	650	18.52

Prob4:- traffic accounts is conducted on a highway section in Tuesday for short intervals as follow: 8-8:30 volume=350vehicle and 13:30-14 volume=260 vehicle. The percentages of these volumes to the daily volume are 6.8% and 5.1%. If the daily volumes during a certain weak for the same section but at another location were as in the table,

Day	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
volume	5320	4880	4740	4940	5080	5130	3680

determine the ADT in the location of the short interval counting.

Prob5:- a traffic survey was conducted on a certain highway section of Sohag city for 5 minutes. For every vehicle type, the volume and the equivalent passenger cars per unite are recorded in the following table.

If the expansion factor for this hour = 29, the correction factor for this day=0.94, and the percentage of traffic in the peak hour to the daily traffic is 10%, determine the DHV.

Vehicle type	volume	Equivalent P.C./unite
Passenger	47	1
Taxi	62	1
Minibus	12	1.665
Bus	0	3.47
Light trucks	1	1.665
Moderate trucks	6	5.175
Heavy trucks	0	5.175