

TE Civil - VI e-scheme

(3 Hours)

[Total Marks: 80]

73

- Note:
- Q. No. 1 is compulsory
 - Attempt any 3 out of remaining 5
 - Support all theory and numerical with neat sketch

1. Solve any four (20 M)
- Enlist various traffic studies and explain any one.
 - Discuss the role of statistics in traffic engineering.
 - Enlist methods of Co-ordinated signal system
 - Explain moving observer method.
 - Explain different types of intersections

2. A. Write a note on PCU and factors affecting PCU (10 M)
 B. Table gives result of the survey of vehicles in parking lot. Find accumulation, total parking average occupancy and efficiency of parking lot of 30 capacity. Assume initially 15 cars were parked. (10M)

Time (min)	5	10	15
In	3	2	4
Out	2	4	2

3. A. Explain the traffic management system (10 M)
 B. Discuss on measures to reduce accidents (10M)

4. A. Design 2 phase signal using webster's method when only straight-ahead traffic is permitted. Also draw phase diagram. (10 M)

	N	S	E	W
Design Flow (q)	800	400	750	1000
Saturation Flow (s)	2400	2000	3000	3000

- B. Explain methods to carry out O and D study. (10M)
5. A. Write a note on road safety audit (10 M)
 B. Explain in detail ITS and its application (10M)

6. A. Two lane road has a capacity of 2000 vehicles per hour. If one lane is closed for maintenance, find the speed of queue generation if the free flow is 1500 vehicles per hour and flow at bottleneck is 900 vehicles per hour. Headway at jam is 6.25 meter. (10 M)

- B. Design a highway lighting system for National Highway of 4 lanes. (10M)