



Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025 Traffic Engineering

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. List the different road user characteristics and explain the concept of PIEV theory. (10 Marks)
- b. Explain the different resistances to be considered in power performance of the vehicle. (10 Marks)

OR

- 2 a. Explain the urban traffic problems in India. (10 Marks)
- b. A vehicle was stopped in 1.4 Sec by fully jamming the brakes and the skid marks measured is 7.0m. Determine the average skid resistance developed. (10 Marks)

Module-2

- 3 a. Explain the concept of traffic volume count with a neat format. (10 Marks)
- b. Spot speed studies were carried out on National Highway with mixed traffic flow and the consolidated data are given below :

Speed range Km/h	No. of vehicles
0 – 10	12
10 – 20	18
20 – 30	68
30 – 40	89
40 – 50	204
50 – 60	255
60 – 70	119
70 – 80	43
80 – 90	33
90 – 100	9

Determine : i) Maximum speed ii) Minimum speed iii) Design speed. (10 Marks)

OR

- 4 a. Explain the concept of level of service with a neat diagram. (10 Marks)
- b. Explain the moving car method to determine speed and delay. (10 Marks)

Module-3

- 5 a. Enumerate the design of rotary intersection with a neat diagram. (10 Marks)
- b. List various types of traffic signs. Explain any two of them with neat sketch. (10 Marks)

OR

- 6 a. Explain the channelized and non-channelized islands in detail, with a neat diagram. (10 Marks)
- b. The average normal flow of traffic on cross roads A and B, during design period are 400 and 250 PCU per hour ; the saturation flow values on these roads are estimated as 1250 and 1000 PCU per hour respectively. The all – red time required for pedestrian crossing is 12 Sec. Design two phase traffic signal with pedestrian crossing by Webster's method. (10 Marks)

Module-4

- 7 a. Explain the collision diagram of accident study. (10 Marks)
- b. List the three measures taken for reduction of accidents and explain any two of them. (10 Marks)

OR

- 8 a. What are the major air pollutants due to road traffic? Explain consequence of each. (10 Marks)
- b. Discuss the need of public transportation in India. (10 Marks)

Module-5

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- 9 a. Explain the application of Intelligent Transport System (ITS) in Smart City Projects.. (10 Marks)
- b. Enumerate the low cost traffic management measures used in urban areas. (10 Marks)

OR

- 10 Write a short note on :
- Travel demand management
 - Parking pricing
 - Public transportation
 - Cycle tracks.
- (20 Marks)

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