

**Reg. No. :**

**Question Paper Code : 31178**

**B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.**

### Seventh Semester

Civil Engineering

CE 2026/CE 701/10111 CEE 21 – TRAFFIC ENGINEERING AND MANAGEMENT

(Regulation 2008/2010)

**Time : Three hour**

Maximum : 100 marks

Answer ALL questions.

**PART A — (10 × 2 = 20 marks)**

1. State the static and dynamic characteristics of vehicle.
2. What is the significance of braking test?
3. What is 98<sup>th</sup> percentile speed? State its significance.
4. Differentiate basic and possible highway capacity.
5. Give any four sketches of warning signs.
6. Write down any two advantages of vehicle actuated signals.
7. Give the conflict point sketch of two-one way streets and mention the points.
8. Draw any four basic forms of at-grade intersections.
9. Write down any two advantages of closing side streets.
10. Give any four techniques in travel demand management.

**PART B — (5 × 16 = 80 marks)**

11. (a) Explain rolling and air resistance.

Or

- (b) Explain the factors affecting load user characteristics.

12. (a) Explain moving observer method.

Or

- (b) Briefly explain the factors affecting capacity and level of service.

13. (a) Explain centre line and lane markings with neat sketches.

Or

- (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 sketch by Webster's method.

14. (a) Explain the capacity of a rotary with valid conditions and equivalency factors.

Or

- (b) Explain three and four leg interchange under grade-separated intersections.

15. (a) Elaborate the advantages of one-way streets.

Or

- (b) Explain the applications of intelligent transportation system.