

Reg. No. :

Question Paper Code : 71218

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Seventh Semester

Civil Engineering

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

(Regulation 2008/2010)

(Common to PTCE 2026 – Traffic Engineering and Management for
B.E. (Part-Time) Sixth Semester – Civil Engineering – Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What do you mean by 'PIEV theory'? Write its significance on road.
2. What are the importance of traffic engineering in Indian context?
3. What is meant by level of service in traffic analysis?
4. Draw a 'typical parking inventory' diagram with all its vital parts.
5. What is 'green corridor' in signal co-ordination? What are its uses?
6. List out various types of 'street furniture' normally provided in common.
7. Draw a typical rotary intersection with all its design elements.
8. List out the different classifications of any intersection.
9. What is 'Traffic Calming'?
10. What are the applications of Intelligent Transportation System (ITS) in traffic engineering?

PART B — (5 × 16 = 80 marks)

11. (a) Write in detail the various road user characteristics with Indian Roads Congress (IRC).

Or

- (b) Write the scope and significance of traffic engineering with various functions of Traffic engineer.

12. (a) Explain in brief the various level of services as per Indian Roads Congress (IRC) Standards for arterial roads and down town streets.

Or

- (b) Explain in brief the origin and destination (O-D) survey methods which are commonly used in traffic planning of metro cities.
13. (a) A two-phase traffic signal is to be installed at a right angled crossing of two city streets. The site is "average" and the approaches are 15 metres wide between kerbs. The design hour traffic volumes in PCU's are given below :

Table Design Hour Traffic Volume in PCU's per hour

From	N			E			S			W		
To	E	S	W	S	W	N	W	N	E	N	E	S
Flow in PCU's per hour	499	850	200	257	930	555	362	964	560	570	880	400

Design the two phase signal with its timing and phasing diagram by making suitable assumption.

Or

- (b) Explain in brief with neat diagrams the various types of carriageway markings and its purpose with IRC standards.
14. (a) Enumerate the various design elements of rotary with IRC Standards and neat sketches and explain its importance and characteristics.

Or

- (b) Explain in detail the different types of grade separated intersections and its functioning with neat sketches and IRC Standards.
15. (a) Discuss in detail the various methods of traffic forecasting to evolve efficient traffic plans for cities like Chennai.

Or

- (b) Write in brief the traffic management measures normally applied to handle the traffic problems with IRC Standards.