Question Paper Code : 52734

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Seventh Semester

Civil Engineering

CE 6006 — TRAFFIC ENGINEERING AND MANAGEMENT

(Regulation 2013)

(Common to PTCE 6006 – Traffic Engineering and Management for
B.E. Part Time – Civil Engineering – Sixth Semester – Regulation 2014)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write any one road characteristic with Indian Road Congress (IRC) standard.

2. Draw land use transport inter-relation circle for sustainable transport planning.

3. Draw neatly a typical Parking Inventory diagram with its all parts in it.

4. Define "Spot speed and Running speed" in traffic speed studies.

5. List out any four merits of a rotary intersection in traffic engineering.

6. Write any four major purpose of provision of channelization in traffic control.

7. Why should the non-motorised transport be encouraged in today's context?

8. List out four demerits of promoting Mass or Public transportation on roads.

9. List out the Travel demand management (TDM) techniques in traffic engineering.

10. What do you mean by the term Intelligent Transportation System (ITS) in traffic engineering with any two of its applications.

PART B — (5 × 13 = 65 marks)

11. (a) Write briefly any four major urban traffic problems in India with sustainable solutions.

Or

(b) Write short notes on the following :

(i) PIEV theory with its significance

(ii) Road user characteristics.

12. (a) Write in brief the different methods of Origin-Destination (O-D) studies with its significance.

Or

(b) Discuss in brief the 'Level of Service' concept with IRC standards for urban roads.

13. (a) Two-phase traffic signal is to be installed at a right angled crossing of urban streets. The site is "average" and the approaches are 16 meters wide between kerbs. The design hour traffic volumes in PCU's are given in the table 13 (a)

Table 13 (a) Design Hour Traffic Volume in PCU's / hour

From	N			E			S			W		
To	E	S	W	S	W	N	W	N	E	N	E	S
Flow in PCU's/hour	49	820	71	65	521	55	66	606	79	72	680	60

Design 2 phase signal with timing and phasing diagram by making suitable assumption.

Or

(b) Explain with neat diagram various design elements to be adopted for a rotary design as per IRC standard with relevant and neat diagrams.

14. (a) Explain in detail various preventive measures to be taken to ensure road safety and to achieve 'Zero Goal' in road accidents.

Or

(b) Write in brief any four environmental hazards of traffic development with its abatement measures.

15. (a) Discuss in brief the traffic regulatory measures commonly implemented in traffic Management treatment as per IRC standards with neat sketches.

Or

(b) Write short notes on the following :

(i) Congestion and Road Pricing

(ii) Co-ordination among Agencies.

PART C — (1 × 15 = 15 marks)

16. (a) What is the role of road marking? Discuss its types with diagram. (15)

Or

(b) Discuss briefly with neat sketches collision and condition diagrams. (15)

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