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Question Paper Code : 50215

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Seventh Semester

Civil Engineering

CE 6006 – TRAFFIC ENGINEERING AND MANAGEMENT

(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. State the scope of traffic engineering.
2. List the various factors affecting skid resistance.
3. What is meant by Parking survey ?
4. Define the terms running speed and journey speed.
5. Explain danger signs in two sentences.
6. What are road markings ?
7. List the causes of road accidents.
8. Name the pollutants in vehicle emissions.
9. What is Traffic Segregation ?
10. State the advantages of intelligent transport system.



PART – B

(5×16=80 Marks)

11. a) i) How does the land use characteristics influence the planning and design of traffic facilities? (6)
- ii) Explain the various road user characteristics affecting traffic performance. (10)
- (OR)
- b) i) Explain briefly the various human factors governing traffic performance. (6)
- ii) Explain the characteristics of vehicles. (10)
12. a) Discuss with neat sketch about the details that have to be collected while conducting parking inventory survey. (16)
- (OR)
- b) i) List the various factors that affect level of service. Explain the different types of level of service. (6)
- ii) Discuss the various methods of carrying out speed and delay study. (10)
13. a) Traffic flow in a rural section at the intersection of two highways in the design year is given below. The highways intersect at right angles and have a carriage way width of 15m. Design the rotary intersection.

Approach	Left turning	Straight Ahead	Right Turning
N	410	640	350
E	420	470	420
S	550	360	430
W	450	410	480

(OR)



- b) A fixed time 2-phase signal is to be provided at an intersection having a North-South and an East-West road where only straight-ahead traffic is permitted. The design hour flows from the various arms and the saturation flows for these arms are given in the following table :
- | | North | South | East | West |
|------------------------------------|-------|-------|------|------|
| Design hour flow (q) In PCU s/hour | 800 | 500 | 700 | 600 |
| Saturation flow (s) In PCU s/hour | 2400 | 2000 | 3000 | 3000 |
- Calculate the optimum cycle time and green times for the minimum overall delay. The Intergreen time should be the minimum necessary for the efficient operation. The time lost per phase due to starting delays can be assumed to be 2 seconds. The value of the amber period is 2 seconds. Sketch the timing diagram for the each phase.
14. a) i) Describe the various measures adopted to reduce noise pollution with respect to vehicular traffic (6)
- ii) Discuss briefly with neat sketches collision and condition diagrams. (10)
- (OR)
- b) i) Explain the various types of street lighting done. (6)
- ii) Explain in detail about the various environmental hazards due to traffic. (10)
15. a) Explain briefly the various traffic management measures commonly adopted. (16)
- (OR)
- b) Discuss briefly the various travel demand management adapted to control traffic in city. (16)