CBCS Scheme

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Fifth Semester B.E. Degree Examination, Dec.2017/Jan.2018
Traffic Engineering

Time: 3 hrs.   Max. Marks: 80

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

Module-1

1 a. List the different road users characteristics and explain the concept of PIEV theory.
(08 Marks)

   b. Discuss various urban traffic problem that India is facing. List some remedial measures also.
(08 Marks)

OR

2 a. What are the different vehicular characteristics which affect road design? Explain.
(08 Marks)

   b. Write short notes on :
      i) Fundamentals of traffic flow
      ii) Integrated planning of town.
(08 Marks)

Module-2

3 a. Mention various applications of "O and D" study. Explain road side interview method of collecting "O and D" data. **(08 Marks)**

   b. Spot speed studies were carried out at a certain stretch of a road highway and the consolidated data collected are given below :

Speed range (km ph)	Number of vehicles observed	Speed arrange (km ph)	Number of vehicles observed
0 to 10	12	50 to 60	255
10 to 20	18	60 to 70	119
20 to 30	68	70 to 80	43
30 to 40	89	80 to 90	33
40 to 50	204	90 to 100	09

Determine :
   i) Upper and lower values of speed limit for regulation
   ii) Design speed for checking the geometric design element of the highway. **(08 Marks)**

OR

4 a. Explain the following terms :
      i) Time headway
      ii) Space headway
      iii) Traffic volume
      iv) Level of service.
(08 Marks)

   b. Define the term "spot speed study". With neat sketch explain enoscope method of measuring spot speed study.
(08 Marks)

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Module-3

5 a. What are the advantages and disadvantages of rotary intersection? **(08 Marks)**
   b. i) Define briefly signal "cycle" and "Interval"
      ii) 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 secs. Design two phase traffic signal by Webster's method. Sketch phase diagram also. **(08 Marks)**

OR

6 a. Mention various classifications of traffic signs. Explain any two of them with neat sketches. **(08 Marks)**
   b. Write short notes on :
      i) Road markings
      ii) Channelized intersections
      iii) Unchannelized intersections. **(08 Marks)**

Module-4

7 a. i) What are the major sources of traffic related noise pollution? Explain.
      ii) Explain controlling methods of noise pollution by traffic. **(08 Marks)**
   b. What are the major air pollutants due to road traffic? Explain consequences of each. **(08 Marks)**

OR

8 a. i) Write various objective of road accidents studies **(04 Marks)**
      ii) Explain in detail the causes for road accidents. **(04 Marks)**
   b. Write short notes on :
      i) Promotion of non – motorized transport
      ii) Measures to decrease accidents. **(08 Marks)**

Module-5

9 a. Define traffic congestion. Explain different method of traffic restrain (reduction). **(08 Marks)**
   b. Explain Intelligent transport system for traffic management. **(08 Marks)**

OR

10 a. Suggest some traffic regulatory measures suitable for urban areas. **(08 Marks)**
   b. Write short notes on :
      i) Requirement of good pricing system
      ii) Travel demand management
      iii) Area traffic control
      iv) Traffic system management. **(08 Marks)**

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