

Roll No .....

**CE-8003 (2) (CBGS)****B.E. VIII Semester**

Examination, May 2019

**Choice Based Grading System (CBGS)****Traffic Engineering***Time : Three Hours**Maximum Marks : 70*

- Note:** i) Attempt any five questions.  
 ii) All questions carry equal marks.  
 iii) Make suitable assumptions wherever necessary.

1. a) Define: 4
    - i) Operating speed
    - ii) Design speed
    - iii) Space mean speed
  - b) How do different vehicular characteristics affects road features? 6
  - c) Define traffic engineering. What is scope of traffic engineering? 4
  2. a) What is the need of traffic volume study? Explain methods of traffic volume study. 7
  - b) Explain the presentation of O-D data with sketch. 7
- OR
- Explain PIEV theory with neat sketch.
3. a) Draw layout of lighting on: 8
    - i) Single side of road
    - ii) Both side of road (staggered)
    - iii) At T intersection
    - iv) At cross roads
  - b) Explain collision and condition diagram. List preventive measure for road accidents. 6

4. a) Define: 4
  - i) Luminous flux
  - ii) Lumen
  - iii) Candela
- b) Draw a fundamental diagram of traffic flow. 4
- c) What is the importance of highway lighting? State the factors influencing night visibility. 6
5. a) Explain the Fundamental factors of night vision. 4
- b) Discuss the -advantages and limitations of One way streets. 4
- c) Explain various methods of on-street parking. 6
6. a) Explain vehicular characteristics considered in traffic engineering. 7
- b) Draw at least 5 signs of each (not to scale) 7
  - i) Regulatory signs
  - ii) Warning signs
  - iii) Information signs
7. a) What are the advantages and disadvantages of providing traffic signals? 7
- b) Find Time mean speed and space mean speed from following data. 7

Speed range (kmph)	Frequency
0-10	8
10-20	18
20-30	26
30-40	30
40-50	18

8. a) Explain various types of road marking as per IRC. 7
- OR
- Discuss the Different types of light sources used for street lighting.
- b) Explain the brief study of mass transportation available in the country. 7