

CE-8003 (2) (CBGS)

B.E. VIII Semester Examination, June 2020

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) Solve all parts of any question in continuous at the same place.

1. a) List out various road user characteristics and vehicular characteristics to be considered in the design of transport infrastructure. Write any two applications of these characteristics. 7
- b) Briefly explain the concept of PIEV theory with a neat sketch. Write any three applications of PIEV theory in geometric design of a typical highway. 7
2. Answer any two of question:
 - a) Enlist various types of volume studies and speed and delay studies. What are the parameters to be determined from volume and speed and delay studies? 7
 - b) Define traffic stream and enlist various traffic stream parameters. Explain any one traffic stream parameter. 7
 - c) Write a short note on: 7
 - i) Capacity
 - ii) Peak hour factor and
 - iii) Headway
3. a) What are the various traffic regulating measures being implemented in a typical Indian city? Explain any three points indicating the necessity of these regulating measures. 7
- b) Briefly explain the various phases of Signal design with a neat sketch and enlist various stages of signal design. 7
4. a) Enlist the factors to be considered for lighting scheme for roads. Briefly explain any two factors. 7
- b) Classify various types of lighting arrangements on bidirectional traffic roads. Draw a neat sketch. 7
5. a) Explain various measures for the reduction of accident rate. 7
- b) Elaborate various challenges for implementing public transport policy and Non-motorized transport policy in developing countries like India. 7

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6. a) Briefly explain the concept of Passenger Car Unit (PCU). List out the governing factors to be considered in the determining the PCU value of particular type of vehicle. 7
- b) Classify various types of pavement markings and Road signs. Write any two objectives indicating the necessity of providing markings and signs. 7
7. a) Establish a relationship between speed, flow and density graphically and explain briefly. 7
- b) Write down fundamental objective of Origin-Destination studies. Enlist various methods for conducting these studies and parameters obtained from these studies. 7
8. a) Draw a neat sketch of collision diagram for the Head on collision occurred at a four leg intersection. Also indicate the possible conflict points at the intersection. Assume all legs are four lane divided carriageway. 7
- b) Write down key differences between coordinated signals and isolated signals. 7

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