

Roll No. :

Total No. of Questions : 8] [Total No. of Pages : 3

23233

**M.Tech. (Civil Engg.) 1st Semester
Examination, March-2021
(Transportation Engg.)
(Elective-II)**

**TRAFFIC ENGINEERING AND
TRAFFIC FLOW THEORY
Paper-CE-642**

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :- Attempt any *five* questions. All questions carry equal marks.

1. (a) Write brief notes on the following :
 - (i) Spot speed
 - (ii) Running speed
 - (iii) Journey speed

- (b) What are the details collected in O & D survey? Describe the most commonly adopted method of O & D Survey. 10,10
2. (a) What do you understand by PCU Value? Explain the equivalent traffic values in terms of PCU. What are the factors on which PCU values depends? Explain briefly.
- (b) Explain the relationship between speed, travel time, volume and density. 10,10
3. What are the objectives of road markings? Also classify the various types of markings. What are the significance of various types of markings? 20
4. (a) What do you understand by LOS? Explain all levels of services with traffic volume.
- (b) What are the objects and scope of traffic engineering? 10,10
5. With neat sketches show the important type of regulatory traffic signs and mention the functions of each. 20

6. Why traffic signals are provided for controlling of flow? Write down the design procedure of traffic signal design. What are the advantages and disadvantages of traffic signals? 20
7. What do you understand by Traffic Regulation? What is its need and scope in traffic engineering? How regulation of speed and vehicles is useful in reducing accidents? 20
8. Write detailed notes on the following theories :
- (i) Lighthill theory
- (ii) Whitham theory 20