Roll No. | | | | | | | | | | | | |

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M.Tech.(Civil Engg.) (2016 Batch) (Sem.–2)

ADVANCED TRAFFIC ENGINEERING

Subject Code : MTCE-208

M.Code : 74301

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

1. What are the different vehicular characteristics which affect the road design? Briefly explain.

2. a) Explain traffic capacity, basic capacity, possible capacity and practical capacity.

   b) Discuss briefly various factors affecting the practical capacity of road.

3. a) Explain the role of pavement surface characteristics in highway geometric design. State the factors affecting friction between pavements and tyres of vehicles?

   b) Design superelevation required at a horizontal curve of radius 300m for speed of 80kmph. Assume suitable data.

4. a) What are the factors on which overtaking sight distance depends? Explain briefly.

   b) Derive an expression for finding stopping sight distance at level and at grades.

5. a) Discuss factors to be considered while designing length of transition curve. Derive an expression for finding length of transition curve on horizontal alignment of highways.

   b) A national highway passing through rolling terrain in heavy rainfall area has a horizontal curve of radius 500m. Design the length of transition curve assuming suitable data.

6. a) What are the conditions when traffic rotary is justified? Explain various advantages and limitations of traffic rotary.

   b) Explain grade separated intersections alongwith their advantages and disadvantages.

7. What are the various types of parking facilities designed for traffic needs? Compare kerb parking with off street parking.

8. With neat sketches show various types of traffic signs, classify them in proper groups.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.