Total No. of printed pages = 2

CT-505/TE/5th Sem/2016/N

TRANSPORTATION ENGINEERING

Full Marks – 70

Pass Marks - 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer *all* questions.

1. Explain the salient features of Nagpur Road Conference and Bombay Road Congress. 5+5=10

2. Explain different factors controlling highway alignment. What are the special considerations required for alignment in hilly areas ? 10

3. Derive the expression for overtaking sight distance on a highway. State the reasons for providing overtaking zones. 7+3=10

[Turn over

4. The speed of overtaking and overtaken vehicles are 70 km/hr and 40 km/hr. respectively on a two way traffic road. If the acceleration of overtaking vehicle is 0.90 m/s^2, then,

   (a) Calculate Safe O.S.D.

   (b) Mention the minimum length of overtaking zones. 10

5. What is super elevation or cant in railway ? Find out the expression for equilibrium super elevation. 10

6. What is permanent way of a railway track ? Explain functions of each component. 2+8=10

7. Explain the following : 2×5=10

   (a) Point and crossing.

   (b) CBR method for highway design.

   (c) PIEV theory.

   (d) Total reaction time

   (e) Flexible and rigid pavement.