

Total No. of Questions :6]

SEAT No. :

P187

[Total No. of Pages :2

Oct./ BE/ Insem. - 502

B.E. (Civil)

TRANSPORTATION ENGINEERING

(2015 Pattern) (Semester - I)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4 and Q.5 or Q.6.*
- 2) *Figures to the right indicate full marks.*
- 3) *Use of logarithmic tables, slide rule, Molli's charts, electronics pocket calculator and steam tables is allowed.*
- 4) *Assume suitable data if necessary.*
- 5) *Neat diagrams must be drawn wherever necessary.*

Q1) a) What are the requirements of an ideal alignment? Discuss briefly. **[5]**

b) Enlist the recommendations of Jayakar Committee report. **[5]**

OR

Q2) a) Write a note on Road Development Plan Vision 2021. **[5]**

b) Calculate the length of different categories of roads according to the Lucknow Road Plan based on the 2001 census data.

Total Area of district = 26800 sq km; Total no of towns = 24 **[5]**

Q3) a) Calculate the safe stopping sight distance for a two-way traffic on a two lane road, if the design speed is 100 Km/h, reaction time is 2.5 sec and Longitudinal coefficient of friction is 0.35 and Transverse coefficient of friction is 0.15. **[5]**

b) What is Superelevation? Discuss in brief how it is attained in the field. **[5]**

OR

P.T.O.

Q4) a) Calculate the extra widening of pavement required on a horizontal curve of radius 650 m on a two-lane highway, the design speed being 80 Kmph.

Assume wheel base of vehicle as 6 m. [5]

b) Write notes on: [5]

- i) Camber and
- ii) Pavement Unevenness.

Q5) a) Discuss the various factors which affect the road user characteristics and their effect on traffic performance. [5]

b) Define the following terms: [5]

- i) Spot Speed
- ii) Running Speed
- iii) Space mean speed
- iv) Modal Speed
- v) Time Headway

OR

Q6) a) What are the objectives of carrying out traffic volume survey? [5]

b) With neat sketches show any five types of regulatory traffic signs and mention their function. [5]

