

FACULTY OF ENGINEERING  
T.E.(Civil) Examination - DEC - 2014  
Transportation Engg-II(Revised)

[Time: THREE Hours]

[Max. Marks: 80]

“Please check whether you have got the right question paper.”

- i) Figures to the eight indicate full marks.  
ii) Question no 1 & question no 6 is compulsory and solve any two questions from remaining from each section.

SECTION A

- Q 1 A two lane road with design speed 80 kmph has horizontal curve of radius 480m. During the rate of super elevation for mixed traffic. By how much should the outer edges of the pavement be raised with respect to the centreline. If the pavement is rotated with respect to the centre line and the width of the pavement at the horizontal curves is 15m (10)
- A 2 A State and explain PIEV theory (08)  
B Discuss the effects of shape of camber and the effects of providing superelevation face. (07)
- Q 3 A Calculate the safe overtaking sight distance for design speeds of 96 kmph. Assume all other data suitably. (08)  
B Calculate the values (i) head light distance and (ii) intermediate sight distance for a highway with a design speed of 65 kmph. Assume suitable all the data required (07)
- Q 4 A Explain super elevation. What are the factors on which the design of super elevation depends? (07)  
B Discuss the desirable properties of bitumen. Compare tar and bitumen (08)
- Q 5 A Explain CBR and test procedure for laboratory and field tests. How are the results of the test obtained and interpreted? (15)

SECTION B

- Q 6 A Calculate the equivalent radius of resisting section of 20 cm slab. Given that the radius of contact area wheel load is 15 cm (10)
- Q 7 A What are general causes of pavement failure (08)  
B What do you understand by reflection cracking and fatigue cracking (07)
- Q 8 Explain flexible and rigid pavements and bring out the points of difference (15)
- Q 9 Explain the effect of climatic variations on pavement design and performance (15)
- Q 10 Explain group index method of pavement design. What are the limitations of this method? (15)