

G 1081

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Reg. No.....

Name.....



**B.TECH. DEGREE EXAMINATION, MAY 2015**

**Seventh Semester**

Branch : Civil Engineering

CE 010 705—TRANSPORTATION ENGINEERING II (CE)

(New Scheme—2010 Admission onwards)

[Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.  
Each question carries 3 marks.*

1. Explain the term kerbs and write its classification.
2. Define the term super elevation.
3. Write down the types of traffic signal.
4. List the desirable properties of soil as a highway material.
5. What are the typical flexible pavement failures ?

(5 × 3 = 15 marks)

**Part B**

*Answer all questions.  
Each question carries 5 marks.*

6. What are the various factors which control the highway alignment ? Explain any one.
7. Explain overtaking sight distance.
8. Explain Maximum and minimum super elevation.
9. Write the types of pavements and explain flexible pavements.
10. Write note on holding apron.

(5 × 5 = 25 marks)

**Part C**

*Answer all questions.  
Each question carries 12 marks.*

11. Explain the Engineering surveys for highway location.

Or

Turn over

12. Calculate the safe stopping sight distance for design speed of 50 kmph for :
- (a) two way traffic on a two lane road ;
  - (b) two way traffic on a single plane road.
13. The radius of a horizontal circular curve is 100 m. The design speed is 50 kmph and the design co-efficient of lateral friction is 0.15.
- (a) Calculate the super elevation required if full lateral friction is assumed to develop ;
  - (b) Calculate the co-efficient of friction needed if no super elevation is provided ;
  - (c) Calculate the equilibrium super elevation if the pressure on inner and outer wheels should be equal.

*Or*

14. Explain in detail about the widening of pavement on horizontal curves.
15. Explain the types of traffic signals.

*Or*

16. Explain in detail about the kerb parking.
17. Explain CBR test for evaluating the stability of soil subgrade.

*Or*

18. List out the typical rigid pavement failures and explain any three in detail.
19. Explain the factors which are considered in the geometric design of runways.

*Or*

20. Explain in detail about the aircraft parking system.

[5 × 12 = 60 marks]

