

Total No. of Questions : 10 ] [ Total No. of Printed Pages : 3

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## **CE-501**

**B. E. (Fifth Semester) EXAMINATION, June, 2009**

**(Civil Engg. Branch)**

**TRANSPORTATION ENGINEERING – II**

**(CE – 501)**

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 35*

**Note :** Total *five* questions are to be solved. Attempt any *one* question from each Unit. All questions carry equal marks.

### **Unit – I**

1. (a) What are the uses of map study in engineering surveys for highway locations ? 10
- (b) Calculate the superelevation to be provided for a horizontal curve with radius of 400 m for a design speed of 100 kmph in plain terrain. What is the coeff. of lateral friction mobilised if superelevation is restricted to 0.07 ? 10

*Or*

2. (a) What is Stopping Sight Distance (SSD) ? Explain the PIEV theory for reaction time of driver on road. 14
- (b) Brief the superelevation and its application in road. 6

**P. T. O.**

**Unit – II**

3. Write short notes on the following : 7, 6, 7

- (a) WBM
- (b) BM
- (c) Cement concrete pavement

*Or*

4. (a) What are the advantages and disadvantages of cement concrete roads ? 10

(b) Discuss the objects of the following types of joints : 10

- (i) Expansion joints
- (ii) Contraction joints
- (iii) Warping joints
- (iv) Longitudinal joints

**Unit – III**

5. (a) Explain the principles of stabilization. Discuss the mechanical stabilization in brief. 12

(b) Describe the causes of failure of Indian roads. 8

*Or*

6. (a) Write the different tests conducted for road aggregate ? Explain the crushing strength test in brief. 12

(b) What is use of bitumen in bituminous road ? Write about recommended tests before its use. 8

**Unit – IV**

7. (a) State the requirements on which, the runway directions are fixed on meteorological considerations. 10

(b) Classify the types of airports generally in use. 10

*Or*

8. (a) Discuss briefly about various factors which influence the length of runway. 10
- (b) Distinguish between runway and landing strip indicating types of construction adopted for both. 10

**Unit – V**

9. Explain the following terms with reference to airport lighting : 7, 7, 6
- (a) Threshold light
- (b) Approach light
- (c) Runway boundary light

*Or*

10. Describe about different enroute and land line aids in Airways Communications. 20