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CE - 501

B.E. V Semester

Examination, December 2015

Transportation Engineering - II

Time : Three Hours

Maximum Marks : 70

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

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1. a) Define superelevation.
b) Explain extra widening requirement.
c) Discuss method of providing camber.
d) Derive an expression for finding stopping sight distances.

OR

Discuss various road patterns in detail.

2. a) Explain uses and functions of seal coat.
b) Explain WBM and IBM.
c) Discuss advantages and disadvantages of rigid pavements.
d) Draw a neat sketch of expansion joint. Explain functions of different parts.

OR

Explain briefly CBR method of flexible pavement design.

PTO

3. a) Define low cost roads.
b) Explain traffic assignment.
c) Discuss in brief different method of soil stabilization.
d) What is a traffic rotary? What are its advantages and limitations in particular reference to traffic conditions in India?

OR

What are the objects of highway lighting? Explain the various design factors in road lighting.

4. a) Explain different features of wind rose diagram.
b) Define taxiways.
c) Discuss basic runway length in detail.
d) Explain geometrical elements of runway.

OR

The length of runway under standard conditions is 2050 m. The airport site has an elevation of 420m. Its reference temperature is 35.0°C . If the runway is to be constructed with an effective gradient of 0.30 percent, determine the corrected runway length.

5. a) Define Imaginary surfaces?
b) Discuss rotating beacon.
c) Discuss approach lightings.
d) What is zoning? Explain zoning regulations.

OR

Write notes on

- i) Beacon light
ii) Apron hangar lighting
iii) Runway threshold lighting
iv) Taxiway lighting