

Roll No

CE - 501**B.E. V Semester**

Examination, June 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 questions 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.

Unit - I

1. a) Name the various ROAD PATTERNS.
 b) Explain briefly factors affecting HIGHWAY ALIGNMENT.
 c) Discuss salient features of NAGPUR ROAD PLAN.
 d) On a highway lag distance is known to be 40m when reaction time of driver is 2 sec. Calculate the super elevation required to develop a friction factor of 0.15. The radius of curve is 140m.

OR

Derive an expression for finding STOPPING SIGHT DISTANCE on a plain road.

Unit - II

2. a) Explain SEAL COAT & TACK COAT.
 b) Explain PRIME COAT and WEARING COAT.
 c) Discuss advantages of RIGID PAVEMENT, briefly.
 d) Draw a neat sketch EXPANSION JOINT. Explain function of different parts.

OR

Draw S-N curve used in fatigue analysis. Explain meaning of different terms. Discuss importance of FATIGUE and RELIABILITY of concrete pavement.

Unit - III

3. a) Explain principles of STABILIZATION OF SOIL.
 b) Discuss advantages of STABILIZATION OF SOIL.
 c) How WBM road is constructed?
 d) Explain various tests carried out on Bitumen.

OR

Draw a neat sketch of TRAFFIC ROTARY. Explain function of different parts.

Unit - IV

4. a) How topography affects AIRPORT site selection.
 b) How SOIL affects AIRPORT site selection.
 c) Explain different aircraft characteristics briefly.
 d) How runway alignment is done by WINDROSE DIAGRAM?

OR

Draw a neat cross-section of TAXIWAY. Explain function of different parts.

Unit - V

5. a) What is importance of IMAGINARY SURFACES?
 b) What are ZONING REGULATIONS?
 c) Explain features of TAXIWAY LIGHTING.
 d) Discuss various features of RUNWAY LIGHTING.

OR

Write a note on

- i) Precision approach radar
 ii) Instrumental landing system.
