

Seat
No.

B.E.(Civil) (Semester -VII) (Revised) Examination, December - 2014
TRANSPORTATION ENGINEERING (New)
Sub. Code :47904

Day and Date :Monday, 8 - 12- 2014

Total Marks : 100

Time : 2.30 p.m. to 5.30 p.m.

- Instructions :
- 1) Attempt any three questions from Section I and Section II.
 - 2) Use of non-programmable calculator is *Permitted*.
 - 3) Figures to the right indicate full marks.

SECTION - I

- Q1)** a) Explain the 'Scope of Highway Engineering'. [8]
b) What do you understand by I.R.C.? State the objectives of I.R.C. [8]
- Q2)** a) Explain the requirements of an ideal highway alignment. [8]
b) Draw cross-section of a road in embankment. Show all the elements.[8]
- Q3)** a) Explain the necessity of Superelevation on the horizontal curves. How is it expressed? State the limiting values of superelevation in plain and hilly terrains as per the IRC recommendations. [8]
b) Calculate the superelevation required on a road curve of radius 240 m for a permissible speed of 96 kmph. The coefficient of friction is 0.12.[8]
- Q4)** a) Enlist various traffic studies. Explain any ONE in detail. [8]
b) Explain 'Roundabout/ Rotary' with a neat sketch. [8]

P.T.O.

Q5) Write notes on any THREE.

- a) Highway drainage
- b) Requirements of good road aggregates
- c) Highway finance
- d) Types of pavements
- e) PIEV theory.

SECTION - II

- Q6) a) Explain: Minimum Turning Radius and Minimum Circling Radius of an aircraft. [8]
- b) Explain various Airport Surveys. [8]
- Q7) a) Explain the factors affecting the site selection for an airport. [8]
- b) Explain Wind Rose Diagram with a neat sketch. [8]
- Q8) a) Explain 'Heading and Bench' method of tunneling in hard rock. [8]
- b) What is the necessity of ventilation in tunnels? How it is achieved? [8]
- Q9) a) Explain the concept of 'Littoral Drift' [8]
- b) Explain various elements of a harbor with the help of neat layout. [8]

Q10) Write notes on any THREE.

- a) Runway orientation
- b) Taxiways
- c) Yaw, Pitch and Roll
- d) Site selection of harbor
- e) Blast fences

