

Seat No.	
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T.E.(Civil Engineering) (Semester - V) (Revised)
Examination, May - 2019
TRANSPORTATION ENGINEERING-I
Sub. Code : 66239

Day and Date : Wednesday, 08- 05 - 2019.

Total Marks : 100

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

- Instructions :
- 1) All questions are compulsory.
 - 2) Use of non-programmable calculator is permitted.

SECTION-I

- Q1) a)** Explain the classification of roads as per Lucknow Road Plan. [8]
b) Define 'Highway Alignment'. What are the requirements of an ideal highway alignment. [8]

OR

Explain the necessity of Superelevation on the horizontal curves. Calculate the superelevation required on a road curve of radius 280 m for a permissible speed of 75 kmph. The coefficient of friction is 0.12 [9]

- Q2) a)** What is the significance of 'Softening Point Test' on bitumen? Explain the test with sketch. [8]
b) Explain components of a flexible pavement with sketch. [8]

OR

Explain 'CBR Test' with sketch. [9]

- Q3) a)** Enlist various traffic studies. Explain any ONE in detail. [8]
b) Explain step-by-step construction of B.B.M. [8]

OR

Explain the importance of 'Highway Drainage'. Explain various methods with sketches. [8]

P.T.O.

SECTION-II

Q4) a) Explain the components of an aircraft with a sketch. [8]

b) Explain various Airport Surveys. [8]

OR

Determine the length of runway required for the following data, [9]

Basic runway length under standard conditions = 1200 m

Site elevation above M.S.L. = 900 m

Airport reference temperature = 16°C

Effective gradient = 0.5%

Q5) a) Explain with sketches : [8]

i) Littoral Drift

ii) Wave action on a sea wall

b) Explain 'Dry Dock' with sketches. [8]

OR

Explain various elements of a harbor with the help of neat layout. [8]

Q6) a) What is the necessity of ventilation in tunnels? How it is achieved? [8]

b) Explain 'Heading and Bench' method of tunneling in hard rock. [8]

OR

Explain 'shield Method' of tunneling in soft ground with sketch. [9]

