



SE-6145

B. E. II (Sem. III) Civil Examination
April / May – 2011
Transportation Engg.-I

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.		Seat No. :	
Name of the Examination :		<input type="text"/>	
← B. E. 2 (Sem. 3) (Civil)		<input type="text"/>	
Name of the Subject :		<input type="text"/>	
← Transportation Engg. 1		<input type="text"/>	
← Subject Code No. :		← Section No. (1, 2,.....) :	
6 1 4 5		Nil	
		Student's Signature	

- (2) Attempt all the questions.
- (3) Figures to right indicate full marks.
- (4) Assume suitable data whenever necessary.
- (5) Draw neat and labelled diagrams wherever necessary.

- 1 (a) Write expanded forms of following : 5
 - (1) ICAO
 - (2) CLW
 - (3) ICF
 - (4) CTOL
 - (5) NHAI
- (b) Discuss advantages and disadvantages of transportation system. 5

OR

- (b) Explain scope of water transportation in India.
- 2 Attempt any four of following : 24
 - (1) What is hauling capacity of a locomotive ? What maximum load can it pull on level track with curvature of 2° at 60 kmph, if a locomotive on M.G. track has three pairs of driving wheels each carrying 25 tonnes. Coefficient of friction = 0.17.

- (2) A smooth pipe carries 6.5 lit/sec of water at 20°C, $\nu = 10^{-6} m^2 / \text{sec}$ with a head loss of 8 cm per 10 m length.

Determine the diameter of pipe.

- (3) What are the factors affecting transportation development ?
- (4) Discuss transportation development before the 19th century.
- (5) Explain highway carrier.
- (6) Compare railway and highway transportation.

3 Write short notes on following : (any four) **16**

- (1) Ship stability
- (2) Transportation and individual
- (3) House power and propulsive force
- (4) Pipeline resistance
- (5) Wheel of industries
- (6) Aircraft buoyancy

4 (a) What are the types of gauge ? Discuss factors affecting selection of type of gauge. **15**

(b) Discuss the factors for selection of airport site.

(c) How orientation of runway is decided ? Explain.

OR

- (c) What is the difference between a port and a harbour ?
Enlist major ports in India.

5 (a) What are the requirements of a good harbour ? **15**

(b) What is buckling of rail ? Discuss about causes of buckling.

OR

- (b) Write strengths and weaknesses of Indian railways.
- (c) Discuss about various components of an airport.

OR

- (c) What are the functions and requirements of ballasts used in railways.

6 Write short notes (any **four**) : **20**

- (i) Railway sleepers
- (ii) Wharf and Jetty
- (iii) Advantages and disadvantages of airways
- (iv) Problems due to non-uniform gauge
- (v) Aircraft parking
- (vi) Coning of wheels.
