



# Transportation Engineering

*Hand Notes For GATE, IES & PSUs*

## Hand Notes

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**Note :** We also providing GATE & IES Materials [Handnotes, Shortnotes & Books], All Reports [Seminar Reports & PPT]

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# TRANSPORTATION ENGINEERING

(8-10 marks)

1. Geometric Design (3 to 4 m)
2. Highway material. (1 to 2 m)
3. Pavement Design (2 to 4 m)
4. Traffic (4 to 5 m)



Complete Class Note Solutions  
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Carriage way  $\Rightarrow$  L.C. = 0.4

# 01 HIGHWAY DEVELOPMENT AND PLANNING

- Romans are the pioneers in road construction, 29 roads meet in Rome.
- First British Road : GT from Calcutta to Delhi.

## → Chronology of Development.

- (i) Treasagat construction T
- (ii) Metcalf construction M
- (iii) Telford construction T
- (iv) Macadam construction. M

## → Highway Development in India

1. Jayakar Committee 1927
2. Central Road Fund - CRF 1929
3. Indian Roads Congress. - IRC 1934
4. Motor Vehicle's Act. 1939
5. Nagpur Road Conference. 1943 - 1963
6. Central Road Research Institute - CRR I. 1950
7. National Highway Act 1956
8. Second Road Development Plan. 1961-1981  
(Bombay Road Plan)
9. Highway research board of IRC - 1973
10. Third Twenty Year Plan. 1981-2001  
(Lucknow Plan).

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11. National Highway Authority of India - NHAI (3) (2)

12. National Highway Development Program - NHDP.

\* Projects under NHDP

(i) Golden Quadrilateral.

Delhi - Kolkata - Chennai - Mumbai

(ii) North South Corridor

Srinagar - Kanyakumari

(iii) East West Corridor

Silchar - Porbandar

(iv) Port connectivity & others.

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Constructions are based on BOT system (Build Operate Transfer). Contractors will build the roads, operate it and transfer it to government finally.

13. State Highway Research Laboratories.

14. Highway staff Training Institute.

15. National Rural Road Development Agency - NRRDA.

o Longest National Highway - NH 7.

Varanasi - Kanyakumari

For more details : [www.nhai.org](http://www.nhai.org)

→ Concept of Saturation System.

Factors considered are :

(i) Population

(ii) Agricultural and industrial productivity.