

Annexure - XIII

DIRECTED STUDY COURSE

C/1931
COURSE NAME: Traffic System Management

Environmental impacts: Transportation noise - standards, measurements and mitigation strategies. Air pollution, Congestion effects, Statistics and analysis. Fuel Consumption and vehicle operating cost.

Traffic safety: Accident studies, Accident data analysis, Statistical methods for data analysis, Road safety principles and practice, Identification of hazardous locations, Counter measures, Road Safety Audit.

Capacity studies: Two lane Highways, Urban Streets, Multilane Highways, Transit systems, Pedestrians; Intersection maneuvers and operation under heterogeneous traffic conditions.

Intersection design: Pedestrian and bicycle facilities, Intersection, roundabout configuration and design. Design of Traffic Control Signals - signal progression, optimization and computer controls.

Traffic management techniques: Improving vehicular flows and Work zone traffic management, Traffic calming, Congestion studies and Road pricing. Traffic demand management techniques for reducing traffic demand, staggered hours and vehicle restrictions; Intersection Management Techniques.

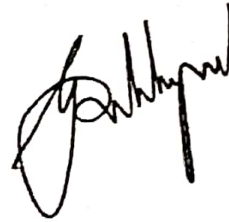
REFERENCES:

1. Kadiyali, L.R., Traffic Engineering and Transport Planning, Khanna Publishers, New Delhi.
2. Pignataro, L., Traffic Engineering: Theory and Practice, John Wiley Transportation Systems Management - State of the Art, UMTA, US Dept. of Transport.
3. C. S. Papacostas and P. D. Prevedouros. Fundamentals of Transportation Engineering. Prentice-Hall, New Delhi, 2009.
4. C. John Khisty, B. Kent Lall, and Transportation Engineering: An Introduction, Prentice Hall, 2003.
5. CSIR - CRRRI, 2018. "Indian Highway Capacity Manual", first ed. 11th Five Year Plan Project, India.

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