RCETCEAC06 - Traffic Flow Modelling

Course outcomes:

- Use the Traffic survey analysis for management of traffic and for designing new road infrastructure
- Ability to design various types of intersections, Implementation of Traffic Control devices and traffic regulations
- Applications of Traffic flow theories in solving congestion problems and use of simulation techniques

Syllabus:

UNIT I

Introduction to Traffic Engineering: Properties of Traffic Engineering Elements, Road Vehicle performance.

Traffic Studies: Volume studies, Speed studies, Origin and destination studies and parking studies

UNIT II

Traffic Control devices Various Traffic Control devices, Principles of Intersection Design, Design of signalized and unsignalized intersections, Signal Coordination

UNIT III

Traffic Regulations and Statistical methods

Traffic Safety and Level-of-service: Accidents, Lighting, Capacity and Level-of-service analysis

Uninterrupted traffic Flow: Theory Fundamentals of Traffic flow theory, Uninterrupted Traffic flow including Macroscopic and Microscopic Traffic flow models. **Interrupted traffic Flow**: Theory Fundamentals of Interrupted Traffic Flow, Shockwave Analysis, Car following theory, Queuing Theory, Vehicle arrival

Reference Text Books:

1. A.D. May, Traffic Flow Fundamentals, Prentice Hall, NJ, 1990.