6CE152 Traffic Engineering

L-T-P-Cr:3-0-0-3

Objective: To introduce the elements related to traffic engineering. The knowledge of traffic surveys, fundamentals of traffic flow elements, traffic operations and controls, traffic regulations, traffic safety.

Theory: 1. Introduction, Traffic Survey: speed, Journey and Delay Surveys, Vehicle Volume counts, O-D survey, Use of Photographic Technique in Traffic survey, Elements of Parking survey Analysis, Statistical Methods of Traffic Engineering. 12 Lectures

2. Fundamentals of traffic flow: Traffic flow elements, gap and gap acceptance, highway capacity analysis. 8 Lectures 3. Traffic operation and Controls: Traffic signs, Road marking, Traffic signals and its design 6 Lectures

4. Traffic Regulations: Regulation of traffic, Design of Controlled and uncontrolled intersections, at grade and grade separated intersections 8 Lectures

5. Traffic Safety: Road accidents, Causes and Prevention, Road safety audit Street Lighting and Traffic management, Traffic calming techniques, Detection of crash prone road locations 8 Lectures

Scheme of Examination: Class test I/Assignment : 5Marks Class test II/Assignment : 5Marks Mid Semester Examination : 20Marks End Semester Examination : 70 Marks

Text Books: 1. Kadiyali, L. R., Traffic engineering and transport planning’,6th edition, Khanna publishers 2. Khanna, S. K. and Justo, C. e. G., Highway Engineering, Nemchand Bros., Roorkee 3. Khisty C.J &Lall B. K., Transportation Engineering, Prentice Hall of India Reference Books: 1. Papacostas, C. S., Fundamentals of Transportation Engineering, Prentice Hall of India, New Delhi. 2. Flaherty C.A., Transport planning and traffic engineering’, Butterworth-Heineman 3. McShane, William R and Roess, RogarP,’Traffic Engineering’, Printice Hall

Expected Outcome: The students should be able to design traffic facilities and conduct traffic surveys, should understands elements of traffic flow, should be able to determine the capacity, level of service and safety performance of highways, design intersection controls and be aware of road signs.