

**UNIT I****Chapter 1 : Fundamentals of Traffic Engineering****1-1 to 1-20****Syllabus :****Traffic Engineering** : Definition, objects, scope**Road user's characteristics** : physical, mental, emotional actors.**Vehicular characteristics** : width, length, height, weight, speed, efficiency of breaks**Road characteristics** : gradient, curve of a road, design speed, friction between road and tyre surface**Reaction Time** : factors affecting reaction time, PIEV Theory

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Methods of collection of traffic volume count data : manual, automatic recorders, moving car method

**Traffic Volume Count Data** : representation and analysis of data

Necessity of Origin and Destination Study and its method.

**Speed Studies** : Spot Speed Studies, and its presentation

Need and method of parking study

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<b>UNIT III</b>
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**Chapter 3 : Road Signs and Traffic Markings****3-1 to 3-31****Syllabus :****Traffic Control Devices** : Definition, Necessity, types**Road Signs** : Definition, objects of road signs

Classification as per IRC: 67-1977-Mandatory or regulatory, Cautionary or Warning, Informatory Signs,

Location of Cautionary or Warning sign in urban and non urban areas, Points to be considered while

Designing the road signs, points to be considered while erecting the road signs

**Traffic Markings** : Definition**Classification of Traffic Markings** : Carriage way, Kerb, Object marking and Reflector markers

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Location of signals

Compute Signal time by fix time cycle, trail cycle, approximate, Webster's and IRC method and sketch timing Diagram for each face

**Traffic Islands :** Definition, advantages and disadvantages of providing islands**Types of traffic islands :** rotary or central, channelizing or refuge islands**Road Intersections or Junctions :** Definition, Types of road intersection**Intersection at grade :** Types, basic requirements of good intersection at grade**Grade Separated intersection :** advantages and disadvantages, **types :** over pass or flyovers-cloverleaf pattern, Trumpet type, underpass**Segregation of traffic :** Definition, purpose, type

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## UNIT V

### Chapter 5 : Road Environment and Arboriculture

5-1 to 5-22

#### **Syllabus :**

**Street lighting** : definition, sources, necessity, types-luminaries, foot candle, lumen, factors affecting their Utilization and maintenance

Factors affecting visibility at night

Arboriculture-definition, objectives, factors affecting selection of type of trees

**Maintenance of trees** : Protection and care of road side trees

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<b>UNIT VI</b>
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**Chapter 6 : Road Accident Studies****6-1 to 6-29****Syllabus :****Road Accidents :** Definition, types-Collision and Non-Collision accidents

Causes of Accidents

Measures to prevent road accidents

Reporting and recording of road accidents

Collision and condition diagram

Considerations regarding road safety

Legislation and law enforcement, education and propaganda

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