

**INDEX****UNIT I****Chapter 1 : Importance of Roads in India 1-1 to 1-13****Syllabus :**

Scope and Importance of roads in India and Its' Characteristics.

Different modes of transportation.

General classification of roads.

Road classification in India (Nagpur plan) Third road development (Lucknow) plan.

Development of Urban roads.

Requirements of an ideal road alignment and the factors affecting road alignment.

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Various terms used in Highway : Camber : Definition, purpose, types as per IRC – recommendations.

Kerbs : Road margin road formation, right of way.

Design speed and various factors affecting design speed as per IRC – recommendations.

Gradient : Definition, types as per IRC – Recommendations.

Sight distance (SSD): Definition, types IRC – recommendations, simple numerical.

Curves : Necessity, types : Horizontal, vertical curves..

Widening of roads : types and problems

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UNIT III

Chapter 3 : Construction of Road Pavements 3-1 to 3-32

Syllabus :

Types of road materials and their Tests : Test on aggregates – Flakiness and Elongation Index test, Angularity Number test, test on Bitumen penetration, Ductility, Flash and Fire point test and softening point test.

Pavement – Definition, Types, structural Components of pavement and their functions.

Construction of WBM road. Merits and demerits of WBM road.

Construction of Flexible pavement / Bituminous Road, Types of Bitumen and its properties, Emulsion, Cutback, Terms used in BR – prime coat, tack seal coat, Merits and Demerits of BR.

Construction of cement concrete- methods of construction – Alternate and continuous Bay Method, Construction joints, filler and sealers, merits and demerits of concrete roads.

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Traffic control devices : Road signs, marking, Signals, Traffic island, Signals - Types,

Road signs : Types - Regulatory, Prohibitory and Informatory, Sketches of road signs. Types of road markings.

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