

1. Introduction

- 1.1 National road transport system.
- 1.2 Transport sector policies and strategies with respect of road transportation.
- 1.3 Institutional background of the Road transport sector.
- 1.4 Major development projects and Economic policies affecting the transport sector.
- 1.5 Concept and Significance of Highway Planning.
- 1.6 Application of computer model in Highway Management.
- 1.7 Social and environmental consequences of Highways and the mitigation measures
- 1.8 South Asia Regional Action plan for Road developments.

2. Highway Design and Geometries

- 2.1 Geometric design standards for highways and their applications.
- 2.2 Design Parameters and criteria of selections.

3. Highway Drainage and Drainage Structures

- 3.1 Fundamental concept of Highway and road side drainages.
- 3.2 Prevention of erosion in road corridor.
- 3.3 Bio-Engineering concepts and their applications.

4. Traffic Characteristics and Traffic Controls

- 4.1 Traffic threshold for road up gradation.
- 4.2 Traffic control and Road Safety Audit.
- 4.3 Maintenance of traffic control devices and safety works.
- 4.4 Public awareness in road safety.
- 4.5 Conceptual planning and design for pedestrians and mass transit facilities.
- 4.6 Pollution Prevention and their Control.
- 4.7 Road accident and preventions.

5. Construction of Highways

- 5.1 Classification of Roads.
- 5.2 Methods and construction technology.
- 5.3 Contract Management and quality aspects of construction.
- 5.4 Environmental and social Impact assessment in road sector and its mitigation.
- 5.5 Monitoring and Evaluation at each level of project.
- 5.6 Private sector involvement and contracting.
- 5.7 Labor Intensive method of roads construction.
- 5.8 Quality control and assurances

6. Highway Maintenance and Rehabilitation

- 6.1 Maintenance management system and its analytical approach.
- 6.2 Importance and challenge of the highway maintenance.
- 6.3 Issues on water management in road maintenance works.
- 6.4 Road Maintenance Training Policy of DOR.

7. Highway Bridges and Tunnels

- 7.1 Location of bridge site and types of bridges in Nepal.
- 7.2 Construction Technology adopted in bridges and tunnels.

लोकसेवा आयोग
नेपाल इन्जिनियरिङ्ग सेवा, सिभिल समुह, हाईवे उपसमुह, रा.प.प्रथम श्रेणी, खुला र आन्तरिक प्रतियोगितात्मक
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- 7.3 Hydraulic and seismic analysis for bridge and tunnel construction.
- 7.4 Drainage, lighting and ventilation requirement in Tunnel.
- 7.5 River banks and river training works.
- 7.6 Maintenance and rehabilitation of bridges and tunnels.
- 7.7 Economical structures including Bridges for Highway Development.

8. Economics, Finance and Administrations

- 8.1 Transport Economics.
- 8.2 National Economy and Road sector development strategy.
- 8.3 Resource Mobilization in transport sector with an analytical approach.
- 8.4 Concept of three year rolling plan.
- 8.5 The road management and finance fund reform implementation committee and its functions.
- 8.6 The concept of Build Operate and Transfer (BOT) with an analytical approach.
- 8.7 Institutional Strengthening.
- 8.8 An analytical review of External Financing in road sector.
- 8.9 Contract disputes resolution.
- 8.10 Concept of Value Engineering.

9. Convention and Implementation

- 9.1 Global and national policies and conventions and their execution
- 9.2 Implementation of Regional and sub-regional charters and their future prospect