

प्रदेश लोक सेवा आयोग

गण्डकी प्रदेश

इन्जिनियरिङ्ग सेवा, सिभिल समूह, हाइवे उपसमूह, अधिकृत नवौं तहका पदको खुला, अन्तरतह र आन्तरिक
प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

द्वितीय पत्र : - सेवा सम्बन्धी प्राविधिक विषय

पूर्णाङ्क:- १००

1. Introduction

- 1.1 National Strategic Road Network and Provincial Road Network of Gandaki
- 1.2 Classification of Roads
- 1.3 Concept and Significance of Highway Planning
- 1.4 Transport planning under federal context
- 1.5 Criteria for carrying out Feasibility study for Highway Projects
- 1.6 Social and environmental consequences of Highways and their mitigation measures
- 1.7 Highway management Information systems
- 1.8 Application of computer model in Highway Management

2. Highway Design and Geometrics

- 2.1 Road geometrics and general considerations
- 2.2 Design Parameters and criteria of selections
- 2.3 Highway structures and design concepts

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 applications

4. Traffic Characteristics and Traffic Controls

- 4.1 Traffic threshold for road up gradation
- 4.2 Traffic control and Road Safety
- 4.3 Nepal Road Safety action plan
- 4.4 Road safety audit
- 4.5 Maintenance of traffic control devices and safety works
- 4.6 Public awareness in road safety
- 4.7 Prevention of road accidents
- 4.8 Prevention and Control of traffic pollution

5. Construction of Highways

- 5.1 Classification of Roads
- 5.2 Methods and construction technologies
- 5.3 Types of surfacing and its construction
- 5.4 Contract Management
- 5.5 Quality Assurances & Quality control and Total Quality Management in construction
- 5.6 Monitoring and Evaluation at each level of project implementation.
- 5.7 Labor Intensive method of road construction

6. Highway Maintenance and Rehabilitation

- 6.1 Maintenance management system
- 6.2 Importance and challenge of the highway maintenance
- 6.3 Issues on water management in road maintenance works
- 6.4 Road assets management
- 6.5 Preformation based maintenance system in road sector

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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.
- 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 Structural analysis and design of Highway structures including Bridges.
- 7.8 Cost effective structures for Highway Design.
- 7.9 Design Considerations in climate change context

8. Economics, Finance and Administrations

- 8.1 Transport Economics.
- 8.2 National Economy and Road sector development.
- 8.3 Resource Mobilization in transport sector.
- 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).
- 8.7 Institutional strengthening.
- 8.8 External Financing.
- 8.9 Concept of Value Engineering.

9. Convention and Implementation

- 9.1 Knowledge on Global and national policies and conventions
- 9.2 Implementation of Regional and sub-regional charters

10. Environmental Assessment

- 10.1 Concept of environmental assessment, Brief environmental study (BES), Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA), role of EIA, EIA principles, types and impacts
- 10.2 Screening, Scooping, Initial Impact Identification, TOR preparation, EIA Report Writing
- 10.3 Management of BES/IEE/EIA process: Public Participation, EIA review, mitigation measures, Monitoring and Environmental Management Plan
- 10.4 Environmental Auditing
- 10.5 Relationship between infrastructure development, environment and climate change
- 10.6 Environmental and social Impacts assessment in road sector and its mitigation.

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