

प्रदेश लोक सेवा आयोग

गण्डकी प्रदेश

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

द्वितीय पत्र : - सेवा सम्बन्धी प्राविधिक विषय

पूर्णाङ्क:- १००

1. Building

- 1.1. Local and Modern building construction materials in Nepal
- 1.2. Present status of government office buildings in Nepal and the need for standardization
- 1.3. Prospects and challenges for maintenance and rehabilitation of government buildings
- 1.4. Efforts in developing indigenous technology in building design and construction
- 1.5. Housing scenario in Nepal, opportunities and constraints
- 1.6. Private and public Partnership in housing
- 1.7. Role of Private sector in housing development
- 1.8. Prospects and challenges in housing construction as an industry and cost control strategies
- 1.9. Housing finance and legislation
- 1.10. National shelter policies and strategies in current periodic plan of Nepal and Gandaki Province

2. Transportation and Trail Bridges

- 2.1. Transport sector policies and strategies in current periodic plan of Nepal and Gandaki Province
- 2.2. Institutional background of the road transport sector
- 2.3. Concept and significance of highway plannings and linkages with international standard.
- 2.4. Classification of Strategic & Rural Roads
- 2.5. Methods of construction technology
- 2.6. Contract Management
- 2.7. Private sector involvement
- 2.8. Labour intensive and capital intensive methods of road construction
- 2.9. Quality Assurances & Quality control and Total Quality Management in construction
- 2.10. Maintenance management and challenges
- 2.11. Institutional Strengthening
- 2.12. Concept of roadside drainage and its management
- 2.13. Prevention of erosion in road corridor
- 2.14. Bio- engineering application
- 2.15. Policies and strategies in current plan regarding Trail Bridge
- 2.16. Local, Provincial and Federal level planning of Suspension and suspended bridge
- 2.17. Design standard of Suspension and suspended bridge
- 2.18. Quality control and monitoring of suspension and suspended bridges
- 2.19. Maintenance of Trail Bridges
- 2.20. Transport Master Plans for planning and management of Federal, Provincial and Local roads

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- 2.21. Labour based, Environment friendly and Participatory (LEP) Approach for rural road development
- 2.22. Basic design concepts of roads
- 2.23. Role of social mobilization in road development
- 2.24. Generations of maintenance fund & maintenance of roads in the context of Federalism
- 2.25. Agricultural roads
- 2.26. Low-cost road construction
- 2.27. Transport-plus approach in road development
- 2.28. Current issues and problems of transport sectors in Nepal and Gandaki Province

3. Water supply and sanitation.

- 3.1. Present Status of water supply and sanitation in Nepal and Gandaki Province
- 3.2. Federal and Provincial (Gandaki) Level Policies in water supply and sanitation in current periodic plan
- 3.3. Current issues and problems of water supply and sanitation sector
- 3.4. National standard of rural and urban water supply
- 3.5. Rural and community based water supply system
- 3.6. Water Supply sources and their management
- 3.7. Water quality, water demand & supply, sources protection
- 3.8. Intakes, Pipeline design, design of transmission and distribution system, reservoir design.
- 3.9. Design of lift water supply systems
- 3.10. Pipe materials and jointing
- 3.11. Operation and maintenance of water supply systems
- 3.12. Legal and management aspects of water supply facilities
- 3.13. Financial aspects-system cost recovery, tariff structure, affordability
- 3.14. Education and training
- 3.15. Environmental Health engineering- epidemiology, pathogens (Bacteria, Virus, Helminthes, Protozoa), infection transmission routes, water related, excreta related, refuse related, housing related infection, on site sanitation system (pit latrine, VIP latrine, eco-san, pour flush, septic tank, etc.) off side sanitation system (waste stabilization pond, aerated lagoon, oxidation ditch, constructed wetland, etc.)
- 3.16. Issues and problems of solid waste management in urban centers and townships

4. Irrigation and drainages

- 4.1. Status of irrigation development in Nepal and Gandaki Province
- 4.2. Federal and Provincial (Gandaki) Level Policies and strategies in irrigation sector in current periodic plan
- 4.3. Integrated water resource management
- 4.4. General irrigation system planning
- 4.5. Design of lift irrigation systems

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- 4.6. Participatory approach in irrigation system management
- 4.7. Operation and maintenance of irrigation systems
- 4.8. Institutional aspects of irrigation system management
- 4.9. Preventive and remedial measures of water logging
- 4.10. Flood control and its necessity and control methods
- 4.11. Surface, subsurface, sprinkler and drip methods of irrigation, their suitability and problems of sprinklers
- 4.12. River training works
- 4.13. Farming system in Nepal
- 4.14. Specific considerations in design, Operation, maintenance and management of hill irrigation systems in Nepal
- 4.15. Land drainage for agriculture, Excess water and relation to drainage, drainage methods
- 4.16. Management of Farmers managed irrigation system
- 4.17. Design considerations in irrigation system in climate change context

5. Environmental impact assessment

- 5.1. 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
- 5.2. Screening, Scooping, Initial Impact Identification, TOR preparation, EIA Report Writing
- 5.3. Management of BES/IEE/EIA process: Public Participation, EIA review, mitigation measures, Monitoring and Environmental Management Plan
- 5.4. Environmental Auditing
- 5.5. Relationship between infrastructure development, environment and climate change
- 5.6. Environmental and social Impact assessment in road sector and its mitigation.

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