

# प्रदेश लोक सेवा आयोग

गण्डकी प्रदेश

प्रदेश वन सेवा, जनरल फरेष्ट्री समूह, नवौं तहका पदको खुला, अन्तरतह र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

द्वितीय पत्र - प्राविधिक विषय

पूर्णाङ्क:- १००

## 1. Forest Resource Management

- 1.1. Concept and significance of forests in terms of environment and economy
- 1.2. Types of forest and species composition with specific references to Gandaki Province
- 1.3. Principles of Forest Management
- 1.4. Historical perspectives of Forest Management in Nepal
- 1.5. Characteristics of Multipurpose plant species
- 1.6. Principles of Multiple Use Forest Management
- 1.7. Various tools and techniques used in Managing Forest Resources in Nepal
- 1.8. Forest regeneration, Plant propagation, growth and yield modeling, Silvicultural systems, Thinning, pruning, shrub land improvement
- 1.9. Silvicultural practices and yield regulation for different types of forest conditions of Nepal
- 1.10. Major International Organizations involved in the Forest Resources Management in Nepal
- 1.11. Forest Management practices and emerging problems, particularly in the Terai and Upland areas of Nepal and the role of Divisional Forest Officers to mitigate such problems
- 1.12. Silvicultural of high value major forest trees, shrubs and herbs species of Nepal
- 1.13. Silvicultural system being applied in the Plantation Forests of Nepal under parastatal control and the government managed forests
- 1.14. Forest certification and its importance in Nepalese context
- 1.15. Similarities and basic differences between Community Forestry and Leasehold Forestry (below poverty line) in terms of objectives, group composition, scope of works, incentives, duration of operational plan and their renewal process.
- 1.16. Emerging Community Forestry issues related to federalisation
- 1.17. Present concept and approaches of Criteria and Indicators for Sustainable Management of Forest Resources
- 1.18. Forest certification – importance, approaches and procedures in the developed countries
- 1.19. Management of forest fire, tree and forest health and application of integrated insect/pest management strategies in forestry
- 1.20. Collaborative Forest Management concepts in the management of Forest resources of Terai and Inner Terai regions of Nepal and the roles of Divisional Forest Officer
- 1.21. Recent involvement of Non-governmental Organizations (NGOs) and Community Based Organizations (CBOs) in managing the Forest Resources of Nepal and their possible areas of involvement in future
- 1.22. Forest management practices and issues in federal context in Nepal with attention to inter-relation among three tiers of Government

## 2. Forest Resource Survey, Inventory and Research

- 2.1. Principles and Practices of Forest Resource Survey, Inventory and Mapping
- 2.2. Principle and practices of experimental design
- 2.3. Sampling techniques for forest inventory
- 2.4. Application of experimental design in forestry research and development

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- 2.5. Importance of Forest Genetics and Tree Improvement in natural resource management
  - 2.6. Research, extension and development linkages in forestry
  - 2.7. Measuring trees and forest in the natural stand and plantations
  - 2.8. Quantitative Resource Assessment/ Inventory techniques of NTFP on forest lands
  - 2.9. Principles and Practices of Remote Sensing (RS), GIS and Space Technology and its application in the overall planning and Development of forestry sector
  - 2.10. Land use/land cover change detection using RS and GIS technology
  - 2.11. Integration of RS and GIS technology in forestry
  - 2.12. Role of the Divisional forest office/r in utilizing Research and Survey results in the overall planning, programming and implementation of the programs in the district
- 3. Agroforestry**
    - 3.1. Theories and principles of Agroforestry
    - 3.2. Agroforestry system practiced in Nepal and its overall evaluation for continuity in future
    - 3.3. Criteria for selection of Agroforestry species at different ecological zones of Nepal
    - 3.4. Characteristics of Multipurpose Tree Species
    - 3.5. Role of Agroforestry in livelihood support and economic development in Nepal
- 4. Forestry extension and Human Resource Development**
    - 4.1. Concept of Forestry extension
    - 4.2. Needs for extension in Forestry Development
    - 4.3. Role of audio-visual aids in Forestry extension communication and categories of such aids for different target groups
    - 4.4. Concept, scope and need of Human Resource Development in Forestry
    - 4.5. District level Human Resources Development Plan preparation
- 5. Non-timber Forest Products (NTFPs) and its relation to livelihood**
    - 5.1. NTFPs as defined by different Organizations
    - 5.2. NTFPs as one of the strategic sectors for poverty reduction in Nepal
    - 5.3. Opportunities and challenges in the promotion of NTFPs in Nepal and specific to Gandaki Province
    - 5.4. Recent tools and techniques in domestication and commercialization of high value NTFPs in different countries including Nepal
    - 5.5. Role of Divisional Forest Offices in Planning and strategy development for conservation, management, enterprise development and marketing of high value NTFPs
    - 5.6. Concepts of organic farming and certification process of NTFPs products.
- 6. Forest economics**
    - 6.1. Contribution of Forests to GDP in terms of cash and environmental services
    - 6.2. Role of the Divisional Forest Office/r in maximizing the revenue of the district
    - 6.3. A vision plan of Divisional Forest Office/r to balance the Demand and Supply situation of Forest Products in the district.
    - 6.4. Potential Forest Based Industries at different physiographic regions of Nepal for economic gains

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- 6.5. Role and Responsibilities of Forest based Parastatal Organizations like (does not exist), Timber Corporation of Nepal and Forest Products Development Board in utilizing the forest products
- 6.6. Role & Importance of Community and Private Sector Involvement in Forest Products Development

### **7. Forest and biodiversity conservation**

- 7.1. Biodiversity as defined by Convention on Biodiversity (1992)
- 7.2. Social, ecological and economic values of Biodiversity
- 7.3. Major Biological Diversity of Nepal, special attention to Gandaki Province and their threats for conservation
- 7.4. Forestry personnel and People interface in conserving the biodiversity outside the Protected Areas
- 7.5. Role of Divisional Forest Office and Wildlife Crime Control Bureau in controlling illegal poaching of wildlife in the districts
- 7.6. The role of corridors and connectivity in wildlife conservation
- 7.7. Biodiversity registration and patent rights- Principles and scope for practice outside the protected areas
- 7.8. Role of the Province Forest Ministry and related Federal Departments of Forests and Soil Conservation, Community Based Organizations (CBOs), Community Based Forest Users Groups (CFUGs), Buffer Zone Councils (BZCs) and Development/Conservation Partners in conserving the biodiversity of the country
- 7.9. Role of the Army Personnel in protecting the Protected Area System of Nepal and the effectiveness of their involvement

### **8. Soil Conservation and Watershed Management outside the protected areas**

- 8.1. Concept of land degradation and its consequences on productivity and infrastructure
- 8.2. Basic concepts of hydrological cycle and its relationships to watershed management
- 8.3. Ecology and Economics of biological and engineering measures of soil conservation
- 8.4. Sustainable Soil Management practices in Nepal
- 8.5. Present trials of water harvesting in the Chure and its scope of replications in terms of economics
- 8.6. Importance and relationship of watershed management to water harvesting development activities such as irrigation, hydropower and drinking water supply scheme
- 8.7. Relationship between development activities with soil conservation and watershed management

### **9. Cross cutting areas in Natural Resource Management**

- 9.1. Contribution of Protected Area System of Nepal in promoting Eco-tourism and GDP
- 9.2. Concept, approaches and application of planning cycle in the Forestry Sector
- 9.3. Logical Framework in Project Designing
- 9.4. Gender and Social equity issues in Forest Resource Management
- 9.5. Good Governance in Natural Resource Management

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- 9.6. Importance of Management Information System in district development & planning and implementation
- 9.7. History, importance & implication of foreign aid in Forest Resource Management
- 9.8. Payment of Environmental Services and International Carbon Market

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