Section A-30 Marks

1. Forest Resource Management
   1.1 Significance of forest resources in terms of environment and economy
   1.2 Forest types of Nepal
   1.3 Principles of Forest Management
   1.4 Historical perspectives of Forest Management in Nepal
   1.5 Characteristics of Multipurpose tree species
   1.6 Forest regeneration, Plant propagation, growth and yield modeling, silvicultural systems, thinning, pruning, shrub land improvement
   1.7 Silvicultural practices and yield regulation for different types of forest conditions of Nepal
   1.8 Forest Management practices and emerging problems, particularly in Terai and Upland area of Nepal
   1.9 Silviculture of high value major forest trees, shrubs and herbs species of Nepal
   1.10 Silvicultural system being applied in the plantation forests of Nepal
   1.11 Similarities and basic differences between community forestry and leasehold forestry (below poverty line) in terms of objectives, group composition, scope of works, duration of operational plan and their renewal process
   1.12 Emerging community forestry issues related to second and third generation
   1.13 Concept and approaches of criteria and indicators for sustainable management of forests
   1.14 Forest certification - concept, importance, approaches and procedures
   1.15 Collaborative Forest Management concept in the management of forest resources of Terai and Inner Terai regions of Nepal
   1.16 Role of NGOs, INGOs, CBOs and local government in managing the forest resources of Nepal
   1.17 People's participation and role of people/local organisation in forest management
   1.18 Similarities and differences between community and collaborative forest management
   1.19 Urban forestry and its role in forestry development
   1.20 In 1.16 role of NGO's and local government
   1.21 Strength and weakness of Operational Forest Management Plan (OFMP)
   1.22 Opportunities and constraints in forest management of Terai of Nepal

Section B-20 Marks

2. Forest Resource Survey, Inventory and Research
   2.1 Principles and Practices of Forest Resource Survey, Inventory and Mapping
   2.2 Theories and principles of experimental design in forestry research
   2.3 Design and techniques of sampling in forest inventory
   2.4 Application of experimental design in forest research
   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 Inventory techniques of Non-timber Forest Products (NTFP) on forest lands
   2.9 Principles and Practices of Remote Sensing (RS), GIS and Space Technology
2.10 Landuse / land cover change detection using RS and GIS technology
2.11 Integration of RS and GIS technology in forestry
2.12 Past, present and future of GIS technology in forestry sector of Nepal

4. Forestry extension and Human Resource Development 10%
   4.1 Concept of Forestry extension
   4.2 Needs for extension in Forestry Development
   4.3 Concept, scope and need of Human Resource Development in Forestry
   4.4 Role of audio-visual aids in Forestry extension, communication and categories of such aids for different target groups
   4.5 HRD issues in forestry sector
   4.6 Motivation for forestry professional
   4.7 Issues of forestry professional in Nepal

Section C-30 Marks

3. Agro-forestry 10%
   3.1 Theories and principles of Agroforestry
   3.2 Agroforestry system practiced in Nepal
   3.3 Criteria for selection of Agroforestry species at different ecological zones of Nepal
   3.4 Linkages between forests, livestock and crops in Nepalese farming systems
   3.5 Problem and prospect of private forestry in Nepal
   3.6 Linkages of private forestry and community forestry

5. Non-Timber Forest Products (NTFPs) and its relation to livelihood 10%
   5.1 NTFPs as defined by different Organizations/ Authors
   5.2 Role of NTFP for poverty reduction in Nepal
   5.3 Silvicultural characteristics of some of the valuable NTFPs of Nepal
   5.4 Opportunities and challenges in the promotion on NTFPs in Nepal
   5.5 Concept and principles of Domestication and commercialization of high value NTFPs
   5.6 Need for and scope of Certification process of NTFPs

8. Forest Economics (unit 8&9: 10%)
   8.1 Contribution of Forestry sector to GDP in Nepal, its limitations and future prospects
   8.2 Demand and Supply situation of Forest Products in Nepal
   8.3 Potential Forest Based Industries in Nepal
   8.4 Role and Importance of Private Sector involvement in forestry business
   8.5 Problems and prospects of forest based enterprise in Nepal
   8.6 Role of forest sector in employment, income generation and livelihood opportunities

9. Cross cutting areas in Natural Resources Management
   9.1 Bottom-up planning process practiced in forestry sector in Nepal
   9.2 Concept of project cycle and logical framework in project designing
   9.3 Gender and social equity issues in Forest Resource Management
   9.4 Concept of Good Governance in Natural Resource Management and its practice in Nepal
6. **Forest and Biodiversity Conservation**  
6.1 Concepts and Principles of Biodiversity as defined by Convention on Biodiversity, 1992  
6.2 Social, ecological and economic values of Biodiversity  
6.3 Major Biological Diversity of Nepal and their threats for conservation  
6.4 Role of corridors and connectivity in Wildlife and Biodiversity conservation  
6.5 Biodiversity documentation- principles and practice in Nepal  
6.6 Role of the Department of Forests (includes District Forest Offices), Community Forest Users Groups (CFUGs), Leasehold Forest Users Groups, Community Development groups and Buffer Zone Committee in conserving biodiversity of the country  
6.7 Local knowledge, indigenous knowledge and intellectual property rights  
6.8 Tools and techniques for biodiversity registration and monitoring

7. **Soil Conservation and Watershed Management**  
7.1 Consequences of land degradation on productivity and infrastructure  
7.2 Basic concepts of hydrological cycle and its relationships to watershed management  
7.3 Ecology and economics of biological and engineering measures of soil conservation  
7.4 Sustainable Soil Management practices in Nepal  
7.5 Concept of Bioengineering and its application in soil and watershed management  
7.6 Importance and relationship of watershed management to water harvesting development activities such as irrigation, hydropower and drinking water supply scheme.

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Sample questions

1. What would be the criteria and indicators for the sustainable management of forest resources in the Terai of Nepal? Please explain in brief.

2. It is often argued that the community forestry development has not gained momentum in the high altitudes of Nepal due to inappropriate extension model being applied. Please propose and explain in brief the type of suitable model you would like to suggest as an experienced extension agent.

3. What could be the best survey method in the hills in measuring the forest areas? Give your justification for choice.

4. What type of plot design would you chose in transect survey to obtain more accuracy? Please proof your choice. How do you align your transect in the hills?

5. What would be the noteworthy characteristics of agroforestry tree species for the Terai region of Nepal? Please suggest name of an appropriate NTFP that could be successfully inter-cropped under Eucalyptus plantations in the Terai.

6. Please explain in brief the values of biological diversity and outline the steps you might wish to follow in “Biodiversity Registration” process.

7. If you have been asked by your boss to prepare the district resource management plan for Dhanusha district for a period of 5 years, what steps do you wish to follow during plan preparation and types of Soil Conservation & Watershed Management activities you would like to prescribe in the plan for the public and private lands locating north of Mahendra highway?

8. As a Program Officer of the District Forest Office which cross cutting area(s) you would like to consider mostly in managing the natural resources of the district? Please specify in brief.

9. How the forestry sector of Nepal contributes to the Gross Domestic Products (GDP) of the country? Please outline the methodology you would like to propose in calculating GDP of the sector.

10. What are the ecological characteristics of Paanchaunle (Dactylorhiza hatagirea)? How can it contribute in reducing the poverty in the rural areas?
सामूहिक छलफल (Group Discussion)

यस प्रयोजनको लागि गरिने परीक्षण ९० पूर्वाङ्ग र ३० मिनेट अबधिको हुनेछ जुन नेताबिहिनी सामूहिक छलफल (Leaderless Group Discussion) को रुपमा अवलम्बन गरिने छ । दिइएको प्रश्न बा Topic का विषयमा पाल्टपालोसंग निर्देश समयभित्र समूहबीच छलफल गर्ने प्रयेक उम्मेदवारसँग व्यस्तित प्रस्तुति (Individual Presentation) गर्नु फर्कने । यस परीक्षणमा मूल्याङ्कनको लागि देखाय अनुसारको ३ जना भन्दा बढीको समिलि रहनेछ ।

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सामूहिक छलफलमा दिइने नमुना प्रश्न बा Topic

उदाहरणको लागि - उज्जा संकेत, गरीबी निवारण, स्वास्थ्य बीमा, खाल नरक, प्रतिभा पलावन जस्ता Topics मध्ये कृपया एक Topic मात्र दिइनेछ ।