

लोक सेवा आयोग

नेपाल वन सेवा, जनरल फरेस्ट्री, नेशनल पार्क्स एण्ड वाइल्डलाइफ, फरेस्ट रिसर्च र स्वायल एण्ड वाटर कन्जरभेशन समूहको राजपत्राङ्कित तृतीय श्रेणीका पदहरूको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार दुई चरणमा परीक्षा लिइने छ :
 प्रथम चरण :- लिखित परीक्षा पूर्णाङ्क :- २००
 द्वितीय चरण :- सामूहिक परीक्षण र अन्तर्वार्ता पूर्णाङ्क :- ४०

प्रथम चरण – लिखित परीक्षा योजना (Examination Scheme)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X अङ्कभार	समय
प्रथम	वन विज्ञान सम्बन्धी विषय	१००	४०	वस्तुगत बहुवैकल्पिक (MCQs)	१००X१ = १००	१ घण्टा १५ मिनेट
द्वितीय	समूह सम्बन्धी विषय	१००	४०	विषयगत (लामो उत्तर)	१०X१० = १००	३ घण्टा

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली	समय
सामूहिक परीक्षण (Group Test)	१०	सामूहिक छलफल (Group Discussion)	३० मिनेट
व्यक्तिगत अन्तर्वार्ता	३०	मौखिक	-

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ।
- पाठ्यक्रमको प्रथम र द्वितीय पत्रको विषयवस्तु फरक फरक हुनेछन्।
- माथि उल्लिखित समूहको पाठ्यक्रमको प्रथम पत्रको विषयवस्तु एउटै हुनेछ। द्वितीय पत्रका विषयवस्तु समूह अनुसार फरक फरक हुनेछन्।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ।
- प्रथम पत्रका पाठ्यक्रमका एकाईहरूबाट सोधिने प्रश्नहरूको संख्या निम्नानुसार हुनेछ। द्वितीय पत्रको पाठ्यक्रमका एकाईहरूबाट सोधिने प्रश्नहरूको संख्या द्वितीय पत्रको पाठ्यक्रम उल्लेख भएअनुसार हुनेछ।

प्रथम पत्रका एकाई	1	2	3	4	5	6	7	8	9	10
प्रश्न संख्या	10	10	10	10	10	10	10	10	10	10

- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ। तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन।
- विषयगत प्रश्नका लागि तोकिएका १० अङ्कका प्रश्नहरूको हकमा १० अङ्कको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ।
- द्वितीय पत्रमा प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन्। परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डको उत्तरपुस्तिकामा लेख्नुपर्नेछ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ।
- प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ।
- यस भन्दा अगाडि लागू भएको माथि उल्लिखित समूहको पाठ्यक्रम खारेज गरिएको छ।
- पाठ्यक्रम लागू मिति :- २०६२/ २/२३ देखि (२०७२/०७/२४ को निर्णय अनुसार सामूहिक परीक्षण समावेश)

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प्रथम पत्र : वन विज्ञान सम्बन्धी विषय

- 1. Silviculture** **10%**
 - 1.1 Common silvicultural terms.
 - 1.2 Forest types of Nepal
 - 1.3 Concept and principle of forest ecosystem, normal forest and locality factors.
 - 1.4 Silvicultural practices adopted for the management of different categories of forests as specified in the Forest Act, 2049 in Nepal (e.g. community forests, leasehold forests, religious forests, plantation forests, natural forests)
 - 1.5 Seed collection, handling, storage and certification
 - 1.6 Principles and practices of natural and artificial regeneration, various techniques of plant propagation, plantation establishment at different sites, types of tending operation and forest rotations
 - 1.7 Principles and methods of tree improvement
 - 1.8 Silviculture of commercial tree species of Nepal

- 2. Forest Management** **10%**
 - 2.1 Understanding about common forest management terms.
 - 2.2 Principles and practices of management of different types of natural and manmade forests in general and in Nepal in particular
 - 2.3 Principles and practices of tree and forest measurement; diameter and height measurement; volume calculation of standing trees, logs and converted timber; measurement of growing stock and yield regulation
 - 2.4 Concepts and methods of timber stand improvement and shrubland management
 - 2.5 Protection of forests from fire, animals, disease and pest, forest encroachment
 - 2.6 Preparation and implementation of forest operational plans, forest management plans
 - 2.7 Principles and methods of community based forest and natural resource management systems in Nepal
 - 2.8 Second generation issues in Community and leasehold Forestry in Nepal
 - 2.9 Methods and approaches to inventory of community forest and various NTFPs

- 3. Forestry Research** **10%**
 - 3.1 Concept and methods of experimental design (Blocking, replications, treatments, randomization)
 - 3.2 Designs used in forestry experiments- Randomized block design, Split plot design, factorial designs
 - 3.3 Statistical methods used in forestry research – statistical parameters, f- test, t- test, analysis of variance, covariance analysis, correlation and regression.
 - 3.4 Theory and principles of tree selection, progeny and provenance trial
 - 3.5 Tools and techniques of socio-economic surveys – PRA, RRA, D&D
 - 3.6 Preparation of simple experimental protocols for forestry research
 - 3.7 Theory and skills in review of literature, field data collection, analysis, report writing and referencing

- 4. Forest resource surveying and mapping** **10%**
 - 4.1 Forest statistics of Nepal
 - 4.2 Principles and methods of forest sampling – sample size, sampling intensity, sampling unit, simple random sampling, stratified random sampling, systematic sampling

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- 4.3 Principles of forest biometrics, tree and forest growth models volume & yield Tables
- 4.4 Principles, tools and techniques used in Remote Sensing, GIS and Photo interpretation
- 4.5 Use of surveying and mapping instruments and preparation of forest maps
- 4.6 Theory and practice of National Forest Inventory and role of ground verification

- 5. Soil Conservation 10%**
 - 5.1 Soil types, formation and profile, physical and chemical properties and classification
 - 5.2 Land use and land capability classification
 - 5.3 Concept of hydrological cycle
 - 5.4 Types of soil erosions and their preventive and control measures
 - 5.5 Soil and water conservation structures - breast walls, retention wall, check dams, ponds, slope stabilization, methods of top soil cover, roadside stabilization
 - 5.6 Bioengineering, Soil fertility and indigenous soil fertility management practices in Nepal
 - 5.7 Concepts and basics of soil loss assessment and soil analysis

- 6. Watershed management 10%**
 - 6.1 Concept and approaches to sustainable watershed management
 - 6.2 Identification, planning and management of micro and macro watershed areas
 - 6.3 Interrelationship between forestry, agriculture, livestock and development 6 infrastructure activities with respect to sustainable watershed management
 - 6.4 Early warning and prevention from natural hazards, measuring water discharge, water quality analysis and checking water runoff and erosions.
 - 6.5 Concept and approaches to water harvesting and conservation farming
 - 6.6 Agroforestry systems and practices in Nepal. Criteria for selection of fuelwood, fodder, bamboo and other NTFP species and their production techniques for rural income and employment for poverty reduction
 - 6.7 Participatory approaches to soil and watershed management

- 7. Planning and management of National Parks and Protected Areas 10%**
 - 7.1 Concepts and approaches to Protected Area (PA) management systems
 - 7.2 Status and classification of Protected Areas in Nepal (National Park, Conservation Area, Hunting reserves, Wildlife Reserve, Buffer Zone etc)
 - 7.3 Preparation and implementation of management plans for different types of Protected Areas. Principles and practice of eco-tourism, visitors management, conflict resolution and monitoring of Protected Areas management and wildlife census
 - 7.4 Conservation education – motivation, communication, exhibition and public relations
 - 7.5 Fundamentals of forest ecosystems, approach and population ecology (population density, carrying capacity, population census, predation, reintroduction and relocation etc.)

- 8. Management of specific habitat and biodiversity conservation 10%**
 - 8.1 Role and scope of PAs and Buffer Zone management in biodiversity conservation

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- 8.2 Approaches to biodiversity conservation, Ecosystem management approach, *in-situ* and *ex-situ* conservation, and conservation of biodiversity at ecosystem, species and genetic level
 - 8.3 Geographical distribution, habitat and behavior of common and endangered Nepalese mammals, birds, reptiles, insects and fish.
 - 8.4 Types of wildlife habitats, habitat analysis and management techniques
 - 8.5 General understanding about IUCN red list, Biodiversity strategy for PAs, Environmental Impact Assessment (including IEE)
 - 8.6 Strategy and Action Plans for the management of rare and endangered wildlife species of Nepal (including Tiger, Rhino, Elephant, Snow leopard etc...)
- 9. Forest Utilisation 10%**
- 9.1 Non-timber forest products of economic importance in Nepal
 - 9.2 Forest based industries and their functioning in Nepal
 - 9.3 Conservation, collection, processing and marketing of high value NTFPs in Nepal
 - 9.4 Role and function of Herbs Production and Processing Company Limited (HPPCL) , Forest Products Development Board, The Timber Corporation of Nepal (TCN) and District Forest Products Supply Committees
 - 9.5 Scope and potential role of different forest products in poverty reduction
- 10. Forestry Sector Policy, Strategy, Acts, Rules and Regulations 10%**
- 10.1 Forest Act, 2049
 - 10.2 Forest Regulation, 2051
 - 10.3 Buffer Zone Management Regulations, 2052
 - 10.4 Environment Protection Act, 2053,
 - 10.5 Environment Protection Regulations, 2054
 - 10.6 Private Forest Nationalization Act, 2013
 - 10.7 Soil and Water Conservation Act, 2039
 - 10.8 Forestry Sector Master Plan, 1988
 - 10.9 Current Five Year Development Plan
 - 10.10 National Parks and Wildlife Conservation Act, 2029
 - 10.11 National Parks and Wildlife Conservation Regulation, 2030
 - 10.12 National Biodiversity Strategy, 2002 AD
 - 10.13 Medicinal Plants and NTFP Policy, 2061 (Jadibuti tatha gairakastha banpaidawar Niti 2061)
 - 10.14 Convention on Biological Diversity, 1992 AD
 - 10.15 Wildlife farming, breeding and research policy, 2060
 - 10.16 Domesticated Elephant Management Policy, 2060
 - 10.17 Procedure for the preparation of Biodiversity Documents, 2060
 - 10.18 Guidelines for the preparation of Terms of Reference and Final report of the Initial Environmental Examination (IEE) 2061
 - 10.19 CITES
 - 10.20 Wetland Policy, 2060
 - 10.21 Nepal Water Policy, 2004
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वस्तुगत बहुउत्तर नमूना प्रश्नहरू (Sample Questions)

- Q1. Which of the following is related with the physical rotation of a Sal tree?
- A) 100 years
 - B) 200 years
 - C) rotation to death
 - D) when CAI and MAI intersect
- Correct answer is (C)**
- Q2. Which is the quarter girth formula?
- A) $(g/4)^2 \times l$
 - B) $\pi d^2 / 4 \times l$
 - C) $(g)^2 / 4 \times l$
 - D) $(\pi d^2 / 4)^2 / l$
- Correct answer is (A)**
- Q3. Under which of the following condition the treatment effect is considered significant for a given level of significance?
- A) tabulated f- value > calculated f-value
 - B) tabulated f-value < calculated f-value
 - C) tabulated f-value is = calculated f-value
 - D) non of above
- Correct answer is (A)**
- Q4. What types of data source were used in the recent National Forest Inventory in Nepal?
- A) Aerial photos
 - B) Satellite images
 - C) Satellite image and Aerial photos
 - D) Remote sensing, GIS and Satellite images
- Correct answer is (C)**
- Q5. Which of the following statements is not true for soil conservation and soil fertility management?
- A) In-situ manuring is a traditional soil management practice in middle hills of Nepal
 - B) N P K are the basic elements determined in a routine soil analysis
 - C) Soil property of a site can be detected through foliage analysis
 - D) FYM denotes for farm yield measurement
- Correct answer is (D)**
- Q6. You are assigned to propagate an elite mother tree of a wild relative of cultivated dioecious fruit tree in an agroforestry system, which of the following propagation method would you suggest?

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- A) seedling propagation method
- B) stump propagation method
- C) grafting/budding method
- D) hybridization/crossing method

Correct answer is (C)

Q7. What range of the National Park income goes to the Buffer Zone community ?

- A) 25-50%
- B) 30-50%
- C) 40-60%
- D) 15-30%

Correct answer is (B)

Q8. What is the threshold for carrying out Environmental Impact Assessment while clear felling or regenerating national forest area according to the Environment Regulation of 2054 BS?

- A) < five hectares
- B) > five hectares
- C) up to five hectares
- D) none of above

Correct answer is (B)

Q9. What is the per kg royalty rate for rattan according to the current Forest Regulation in Nepal?

- A) Rs 5/kg
- B) Rs 10/kg
- C) Rs 15/kg
- D) Rs 20/kg

Correct answer is (C)

Q10. When did Nepal signed the Convention on Biological Diversity

- A) 12 June 1993
- B) 14 June 1993
- C) 23 Nov. 1992
- D) 12 June 1992

Correct answer is (D)