

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश कृषि सेवा अन्तर्गतका लाइभस्टक, पोल्ट्री एण्ड डेरी डेभलपमेन्ट समूह, अधिकृतस्तर सातौं तहको पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

|               |                                     |                  |
|---------------|-------------------------------------|------------------|
| प्रथम चरण:-   | लिखित परीक्षा (Written Examination) | पूर्णाङ्क :- २०० |
| द्वितीय चरण:- | (क) सामूहिक परीक्षण (Group Test)    | पूर्णाङ्क :- १०  |
|               | (ख) अन्तर्वार्ता(Interview)         | पूर्णाङ्क :- ३०  |

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

| पत्र    | विषय              | खण्ड   | पूर्णाङ्क | उत्तीर्णाङ्क | परीक्षा प्रणाली     |                           | प्रश्नसंख्या x अङ्क                    | समय                 |
|---------|-------------------|--|-----------|--------------|---------------------|---------------------------|--|---------------------|
| प्रथम   | General Subject   | <b>Part I:</b><br>General Awareness & General Ability Test | १००       | ४०           | वस्तुगत (Objective) | बहुवैकल्पिक प्रश्न (MCQs) | ५० प्रश्न x १ अङ्क                     | १ घण्टा<br>३० मिनेट |
|         |                   | <b>Part II:</b><br>General Technical Subject               |           |              |                     |                           | ५० प्रश्न x १ अङ्क                     |                     |
| द्वितीय | Technical Subject |  | १००       | ४०           | विषयगत (Subjective) | छोटो उत्तर लामो उत्तर     | ४ प्रश्न x ५ अङ्क<br>८ प्रश्न x १०अङ्क | ३ घण्टा             |

द्वितीय चरण : सामूहिक परीक्षण (Group Test) र अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ४०

| पत्र / विषय                  | पूर्णाङ्क | परीक्षा प्रणाली                     | समय      |
|------------------------------|-----------|-------------------------------------|----------|
| सामूहिक परीक्षण (Group Test) | १०        | सामूहिक छलफल (Group Discussion)     | ३० मिनेट |
| अन्तर्वार्ता (Interview)     | ३०        | बोर्ड अन्तर्वार्ता(Board Interview) | -        |

द्रष्टव्य:

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- प्रथमपत्र र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- 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 प्रश्नहरूको हकमा तोकिएको अंकको 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 (विषयगत प्रश्न हुनेका हकमा) 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 विज्ञापन हुदाँका वखत (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झन पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति: २०७७।१२।०३

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**प्रथम पत्र (Paper I): General Subject**

**Part (I) : - General Awareness & General Ability Test (50 Marks)**

- 1. General Awareness and Contemporary Issues (25x1 Mark = 25 Marks)**
- 1.1. Physical, socio-cultural and economic geography and demography of Nepal
  - 1.2. Major natural resources of Nepal
  - 1.3. Geographical diversity, climatic conditions, and livelihood & lifestyle of people
  - 1.4. Notable events and personalities, social, cultural and economic conditions in modern history of Nepal
  - 1.5. Current periodical plan of Nepal
  - 1.6. Information on sustainable development, environment, pollution, climate change, biodiversity, science and technology
  - 1.7. Nepal's international affairs and general information on the UNO, SAARC & BIMSTEC
  - 1.8. The Constitution of Nepal (From Part 1 to 5 and Schedules)
  - 1.9. Governance system and Government (Federal, Provincial and Local)
  - 1.10. Provisions of civil service act and regulation relating to constitution of civil service, organisational structure, posts of service, fulfillment of vacancy and code of conduct
  - 1.11. Functional scope of public services
  - 1.12. Public Service Charter
  - 1.13. Concept, objective and importance of public policy
  - 1.14. Fundamentals of management : planning, organizing, directing, controlling, coordinating, decision making, motivation and leadership
  - 1.15. Government planning, budgeting and accounting system
  - 1.16. Major events and current affairs of national and international importance
  - 1.17. Provincial major livestock programs and its importance
  - 1.18. Importance of livestock tourism
- 2. General Ability Test (25 ×1 Mark = 25 Marks)**
- 2.1. **Verbal Ability Test (8x1 Mark = 8 Marks)**  
Jumble words, Series, Analogy, Classification, Coding-Decoding, Matrix, Ranking Order Test, Direction and Distance Sense Test, Common Sense Test, Logical Reasoning, Assertion and Reason, Statement and Conclusions
  - 2.2. **Numerical Ability Test (9x1 Mark = 9Marks)**  
Series, Analogy, Classification, Coding, Arithmetical reasoning/operation, Percentage, Ratio, Average, Loss & Profit, Time & Work, Data interpretation & Data verification
  - 2.3. **Non-verbal/Abstract Ability Test (8x1 Mark = 8 Marks)**  
Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion/Finding, Analytical Reasoning Test, Figure Formation and Analysis, Rule Detection, Water images, Mirror images, Cubes and Dice & Venn-diagram

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**Part (B) : - General Technical Subject (50 Marks)**

- 1. LIVESTOCK DEVELOPMENT related plans, policies and acts** **6%**
- 1.1. Current periodic plan and Agriculture Development Strategy (ADS)
  - 1.2. Animal health and livestock services Act and Regulation
  - 1.3. Animal slaughterhouse and Meat Inspection Act and Regulation
  - 1.4. Livestock development approaches
- 2. ANIMAL NUTRITION** **14%**
- 2.1. Functions of water, proteins, fats, carbohydrates, minerals and vitamins in animal body and their requirements for different species of livestock and poultry - their sources and deficiency syndromes
  - 2.2. Intake, digestion, utilization and metabolism of various nutrients by ruminants and non-ruminants
  - 2.3. Factors affecting nutritive value of feed stuffs
  - 2.4. Feed additives- antioxidants, antibiotics, probiotics, antifungal, coccidiostat and growth promoters
  - 2.5. Utilization of crop and industrial by-products in poultry and livestock
  - 2.6. Feeds and feeding standards for each livestock and poultry species at different stages
  - 2.7. Anti-nutritional factors in feed and fodder
- 3. PASTURE AND FODDER** **26%**
- 3.1. Morphology of pasture and fodder crops
  - 3.2. Classification of different types of pasture and fodder species
  - 3.3. Agronomical management of tropical, sub-tropical and temperate species of grasses and legumes such as stylo, berseem, oat, rye grass, soybean, sorghum, Para grass, broom grass, Centro, Napier, desmodium, vetch, clover, teosente, molasses, cowpea, velvet bean and kudzu Malato, Pashplum, Sudan Bazare Sumbasateria, Jointvetch etc.
  - 3.4. Nursery management of fodder tree species
  - 3.5. Agronomical management of fodder trees such as Badahar, Kutmiro, Tanki, Leucaena, Khannyo, Kimbu, Kabro, Pakhuri, Dabdabe, Bakaino etc.
  - 3.6. Different methods of forage conservation- hay, silage and their nutritive values and their Digestibility
  - 3.7. Agro-forestry / Silvi-pasture in community and leasehold forestry, fruit orchard
  - 3.8. Principles and practices of forage seed production
  - 3.9. Seed (foundation and certified) production of different pasture and fodder species including fodder trees in different eco-zones
  - 3.10. Quality management of seed and methods of estimation
  - 3.11. Different Method of analysis TDN, DCP, CP, CF, NDF

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- 4. ANIMAL BREEDING AND REPRODUCTION** **20%**
- 4.1. The cell and cell division
  - 4.2. Segregation and recombination of genes
  - 4.3. Expression of genes - additive and non-additive gene action, causes of variation in gene expression
  - 4.4. Heritability and repeatability estimates
  - 4.5. Breeding values, measure of genetic and phenotypic relationships
  - 4.6. Principles of selection: Selection differential, selection response, selection intensity, generation interval, phenotypic, genetic and environmental correlation and genetic progress
  - 4.7. Indigenous and exotic breeds of livestock and poultry and their characteristics
  - 4.8. Types of breeding: inbreeding, line breeding, outcrossing, outbreeding, crossbreeding
  - 4.9. Anatomy of male and female reproductive organs of different species of livestock and poultry
  - 4.10. Hormones of reproduction and their functions-estrous cycle, ovulation, fertilization, gestation and parturition; induction and synchronization of ovulation
  - 4.11. Reproductive disorders and their corrective measures
- 5. LIVESTOCK AND POULTRY MANAGEMENT** **24%**
- 5.1. Husbandry**
- 5.1.1. Housing and space requirement of different livestock and poultry
  - 5.1.2. Different types of record maintenance of farm animals and poultry
  - 5.1.3. Management of different stages of animal (young, pregnant, lactating, dry etc.)
  - 5.1.4. Management of livestock and poultry breeding stocks
  - 5.1.5. Hatchery management- factors influencing hatching results
  - 5.1.6. Management of chicks, growers and layers including broilers
  - 5.1.7. Hygienic milk production
  - 5.1.8. Techniques of low cost milk production
- 5.2. Animal Health**
- 5.2.1. Sanitation and prophylactic measures
  - 5.2.2. External and internal parasites - their control measures
  - 5.2.3. Symptoms, prevention and control measures of common livestock and poultry diseases- scour, mastitis, H.S., FMD, Calf pneumonia, bloat, PPR, black quarter, enterotoxaemia, foot rot, pox, swine fever, Ranikhet, Gumboro, Marecks, CRD, etc.
  - 5.2.4. Zoonotic diseases and their importance to public health
- 6. DAIRY** **10%**
- 6.1 Milk secretion phenomenon
  - 6.2 Composition of milk of different livestock species
  - 6.3 Factor affecting the composition of milk and milk quality
  - 6.4 Nutritive value of milk with respect to different milk constituents
  - 6.5 Physical and chemical properties of milk
  - 6.6 Pasteurization and homogenization of milk
  - 6.7 Legal standard of different dairy product in Nepal
  - 6.8 Hormones related to milk secretion and letdown
  - 6.9 Method of preparation different milk products

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**द्वितीय पत्र (Paper II) Technical Subject**  
**Section A - 20 Marks**

- 1. ANIMAL NUTRITION** **20%**
- 1.1. Conventional and non-conventional feeds
  - 1.2. Nutritional contents of different species of pasture, fodder, fodder trees including indigenous species, agricultural and industrial by-products
  - 1.3. Anti-nutritional factors in feeds and fodders
  - 1.4. Different methods of nutritional analysis of livestock feeds and fodder
  - 1.5. Computation and evaluation of ration for different livestock and poultry species
  - 1.6. Utilization of wastes in animal feeding

**Section B - 20 Marks**

- 2. PASTURE AND FODDER** **20%**
- 2.1. Soil fertility evaluation- soil testing, plant analysis, deficiency symptoms and biological test in relation to pasture and fodder species
  - 2.2. Soil organic matter and organic manure in relation to pasture and fodder species
  - 2.3. Agronomical management of tropical, sub-tropical and temperate species of grasses and legumes such as stylo, lucern, berseem, oat, rye grass, soybean, sorghum, paragrass, broom grass, centro, napier, desmodium, vetch, clover, teosente, molasses, cowpea, velvet bean, kudzu, Molato, Pashplum, sumbasateria, suden Jointvetch, Bazara, Forarge, Peanut
  - 2.4. Agronomical management of fodder trees such as Badahar, Kutmiro, Tanki, Epil epil, Khannyo, Kimbu, Kabro, Pakhuri, Dabdabe, Bakaino etc.
  - 2.5. Pasture and rangeland management practices in different eco-zones
  - 2.6. Different methods of forage conservation- hay, silage and their nutritive values and their digestibility
  - 2.7. Utilization of crop residues - improvement of nutritive values
  - 2.8. Agro-forestry/Silvi-pasture in community and leasehold forestry, fruit orchard
  - 2.9. Principles and practices of forage seed production
  - 2.10. Seed (foundation and certified) production of different pasture and fodder species including fodder trees in different eco-zones
  - 2.11. Quality management of seed and methods of estimation

**Section C - 30 Marks**

- 3. ANIMAL BREEDING AND REPRODUCTION** **20%**
- 3.1. Concept of genetic resistance to diseases and parasites
  - 3.2. Indigenous and exotic breeds of livestock and poultry and their characteristics
  - 3.3. Methods of selection- independent culling, tandem, and selection index
  - 3.4. Hormones of reproduction and their functions-estrous cycle, ovulation, fertilization, gestation and parturition; induction and synchronization of ovulation;
  - 3.5. Reproductive disorders and their corrective measures
  - 3.6. Collection, processing, evaluation and storage of warm and frozen semen
  - 3.7. Artificial insemination technique, heat synchronization and pregnancy diagnosis
  - 3.8. Embryo-transfer technology in livestock development
  - 3.9. Formulation of breeding plan for livestock and poultry species
  - 3.10. Importance of animal genetic resources conservation (AnGR)

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**4. DAIRY**

**10%**

- 4.1. Pasteurization and homogenization of milk
- 4.2. Standardization of milk, cream and other milk products
- 4.3. Methods of preparation, types, nutritive value of yoghurt, butter, ghee, cheese, paneer, khuwa, ice cream and chhurpi
- 4.4. Milk borne diseases in brief
- 4.5. Packaging and storing of milk and milk products
- 4.6. Development and project planning and business plan of mini dairy plant
- 4.7. Costing of different dairy products
- 4.8. Schedule for maintenance of dairy plants

**Section D - 30 Marks**

**5. LIVESTOCK AND POULTRY MANAGEMENT**

**30%**

**5.1. Husbandry**

- 5.1.1. Functions and tools of farm management
- 5.1.2. Management of different stages of animal (young, pregnant, lactating, dry etc)
- 5.1.3. Management of livestock and poultry breeding stocks
- 5.1.4. Handling and utilization of livestock and poultry farm wastes
- 5.1.5. Hatchery management- factors influencing hatching results
- 5.1.6. Management of chicks, growers and layers including broilers
- 5.1.7. Hygienic milk production
- 5.1.8. Environmental issues of livestock and poultry farming
- 5.1.9. Good Management Practices (GMP) in livestock and poultry farming

**5.2. Animal Health**

- 5.2.1. Sanitation and prophylactic measures
- 5.2.2. External and internal parasites - their control measures
- 5.2.3. Symptoms, prevention and control measures of common livestock and poultry diseases - scour, mastitis, H.S., FMD, Calf pneumonia, bloat, PPR, black quarter, enterotoxemia, foot rot, pox, swine fever, Ranikhet, Gamboro, Mareks, CRD
- 5.2.4. Zoonotic diseases and their importance to public health
- 5.2.5. Bio-security measures of livestock and poultry farming
- 5.2.6. Control and prevention method of economically important disease

**5.3. Livestock Marketing**

- 5.3.1. Relationship between livestock production and marketing
- 5.3.2. Types of markets for livestock and livestock products
- 5.3.3. Factors affecting the livestock markets
- 5.3.4. Livestock market promotion and sustainable management
- 5.3.5. Economics of poultry (layers and broilers) farming
- 5.3.6. Economics of livestock (cattle, buffalo, goat, sheep, pig, and rabbit) farming
- 5.3.7. Problems of livestock marketing in Nepal

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