

नेपाल सरकार
गृह मन्त्रालय
प्रहरी प्रधान कार्यालय
(मानवश्रोत एवं प्रशासन विभाग, भर्ना तथा छनौट महाशाखा)
नक्साल, काठमाण्डौ ।

प्राबिधिक प्रहरी निरीक्षक (भेटेरिनरी समूह) पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम ।

पाठ्यक्रमको रूपरेखा:- यस पाठ्यक्रमको आधारमा निम्नानुसार दुई चरणमा परीक्षा लिईने छ :-

प्रथम चरण:- लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २५०

द्वितीय चरण:- अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ३५

प्रथम चरण:- लिखित परीक्षा योजना (Examination Scheme)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X अङ्कभार	समय
प्रथम	पशु स्वास्थ्य	१००	४०	वस्तुगत बहुतर (Multiple Choice)	१००X१ = १००	१ घण्टा १५ मिनेट
द्वितीय	समूह सम्बन्धी विषय	१००	४०	विषयगत (Subjective)	१०X १० = १००	३ घण्टा
तृतीय	नेपाल प्रहरी सेवा सम्बन्धी	५०	२०	वस्तुगत बहुउत्तर	१० X १ = १०	१ घण्टा १० मिनेट
				विषयगत	लामो उत्तर १X१० = १० छोटो उत्तर ६X५ = ३०	

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली
व्यक्तिगत अन्तर्वार्ता	३५	मौखिक

- लिखित परीक्षा माध्यम भाषा नेपाली वा अंग्रेजी अथवा दुवै हुन सक्नेछ ।
- पाठ्यक्रमको प्रथम र द्वितीय पत्रको विषयवस्तु फरक फरक हुनेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- प्रथम तथा द्वितीय पत्रका पाठ्यक्रमका एकाईहरूबाट सोधिने प्रश्नहरूको संख्या निम्नानुसार हुनेछ । तृतीय पत्रको हकमा तृतीय पत्रको पाठ्यक्रममा उल्लेख भए बमोजिम हुनेछ ।

प्रथम पत्रका एकाई	१	२	३	४	५
प्रश्न संख्या	१०	४०	२०	१५	१५
द्वितीय पत्रका खण्ड	A		B	C	
द्वितीय पत्रका	१	४	२	३	
प्रश्न संख्या	२	१	५	२	

- प्रथम पत्रमा वस्तुगत बहुउत्तर (Multiple Choice) प्रश्नहरूको उत्तर सही दिएमा प्रत्येक सही उत्तर बापत पुरा अङ्क प्रदान गरिनेछ भने गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिईने छैन र अङ्क कट्टा पनि गरिने छैन ।

६. द्वितीय पत्रको 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 ।
७. द्वितीय पत्रको पाठ्यक्रमलाई ३ वटा खण्ड / एकाईमा विभाजन गरिएको छ, ३ वटा खण्ड/ एकाईको लागि ३ वटै उत्तरपुस्तिका दिईनेछ र परिक्षार्थीले प्रत्येक खण्ड एकाईका प्रश्नहरूको उत्तर सोही खण्ड एकाईको उत्तर पुस्तिकामा लेख्नु पर्नेछ ।
८. यस पाठ्यक्रममा जेसुकै लेखिएको भएता पनि पाठ्यक्रममा परेका ऐन,नियमहरू परीक्षाको मिति भन्दा ३ (तीन) महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा रहेका सम्भन्धनु पर्दछ ।
९. प्रथम चरण लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ ।
१०. अन्तर्वार्ताको अंकभार सम्बन्धमा प्रहरी सेवाको पदमा नियुक्ति र बढुवा गर्दा अपनाउनु पर्ने सामान्य सिद्धान्त, २०६९ को अनुसूची-१९ मा व्यवस्था भए बमोजिम हुनेछ ।
११. पाठ्यक्रम लागु मिति :- २०७०/०७/१५ गते ।

प्रथम पत्र :- पशु स्वास्थ्य

1. Introduction

10%

1.1 History and current status of veterinary services in Nepal

1.2 Current status of livestock production and production systems of livestock and poultry in Nepal

1.3 Indigenous and exotic breeds of livestock and poultry and their population in Nepal

1.4 Role of public and private sector in the promotion of veterinary services in Nepal

1.5 Recent HMG/N policies and plans related to livestock development

1.6 Provisions made by APP, Livestock Master Plan and Dairy development Plan for Livestock sector development

2. Clinical subjects

40%

2.1 Veterinary Medicine

2.1.1 Distinguish between health and disease, General clinical examinations of animals, Normal physiological values like body temperature, rectal temperature, heart rates, respiratory rates, urinary volume and fecal output of different species of animals

2.1.2 Systemic disease: Etiology, diagnosis and treatment of: Disease of Blood, lymphatic and cardiovascular system, Disease of Digestive system, Common disease of eye and ear, Disease of Endocrine system, Disease of Nervous system, Disease of Reproductive and urinary system, Disease of Respiratory system, Disease of Skin

2.1.3 Metabolic and production diseases

2.1.4 Nutritional deficiencies disease

2.1.5 Trans-boundary animal disease (TADs): Definition, etiology, epidemiology, transmission, pathogenesis, symptoms, diagnosis, treatment, control and prevention of the following TADs: FMD; RP; PPR; CBPP; Sheep pox and Goat pox; Blue tongue; Classical swine fever; Highly Pathogenic Avian Influenza; New castle disease

2.1.6 Other Infectious disease: Definition, etiology, epidemiology, transmission, pathogenesis, symptoms, diagnosis, treatment, control of the following infectious disease: HS; BQ; Malignant edema; Tetanus; Anthrax; Tuberculosis; Paratuberculosis; Actinomyces; Actinobacillosis; Brucellosis; Listeriosis; Leptospirosis; Mastitis; Strangles; Glanders; Degnala disease; Salmonellosis; Mycoplasmosis; Mad cow disease; Rabies; Scrapie; Canine distemper; Infectious Canine hepatitis, Parvo, Para influenza.

2.1.7 Etiology, epidemiology, transmission, pathogenesis, symptoms, diagnosis, treatment, and control of the common disease caused by chlymedia, Ricktesia and Fungi in different species of animals

2.1.8 Disease of Poultry: Definition, etiology, epidemiology, transmission, , pathogenesis, symptoms, diagnosis, treatment, control of the following poultry disease: Fowl pox; Fowl Typhoid; BWD; CRD; Infectious bursal disease; Infectious bronchitis; Marek's disease; Avian leucosis complex; Egg drop syndrome; Leechy heart disease; Fowl cholera; Aflatoxicosis

2.1.9 Parasitic disease: Etiology, epidemiology, transmission, pathogenesis, symptoms, diagnosis, treatment, control of the following parasitic disease Helminthic parasitic disease: LF; Paramphistomiasis; Ascariasis; G.I. Nematodiasis; Tape worm infection in different species of

animals Ecto.parasitism, General control measures of Gastro intestinal parasitism in animals. Protozoan diseases: Anaplasmosis; Babesiosis; Theileriosis; Trypanosomiasis; Toxoplasmosis; and Coccidiosis

2.1.10 Diagnosis, treatment and management of different form of poisonings and snake bite

2.1.11 Prospects and constrains of animal and poultry vaccine production in Nepal, their uses and abuses

2.2 Veterinary Surgery

2.2.1 General surgical principles and procedures adopted in surgery

2.2.2 Pre and post operative considerations

2.2.3 Antiseptics and disinfectants

2.2.4 Sterilizations of surgical materials and instruments.

2.2.5 Importance of sutures and suturing materials

2.2.6 Inflammations; Abscess; Tumors; Cysts; Hematoma; Hernia and their treatment

2.2.7 Different types of wounds and their treatment

2.2.8 Gangrene; Burn, Scald; Frost bite and their treatment

2.2.9 Fractures and dislocations, their diagnosis and treatment

2.2.10 Special surgery; Caesarian section; Rumenotomy; Ovario-hysterectomy, Stringhalt; Spaying and Neutering

2.2.11 Different types of local , regional and general anesthetic procedures

2.3 Veterinary obstetrics and Gynecology

2.3.1 Normal reproductive cycle of different farm animals and dogs.

2.3.2 Breeding soundness examination of bull

2.3.3 Detection of heat

2.3.4 Artificial insemination

2.3.5 Pregnancy diagnosis

2.3.6 Embryo transfer

2.3.7 Concept of infertility and sterility

2.3.8 Diagnosis and treatment of silent estrus, an-estrus, repeat breeders metritis, endometritis and pyometra

2.3.9 Dystokia and its correction

2.3.10 Prolapse of uterus, bladder and vagina

2.3.11 Use of hormones and prostaglandins

2.3.12 Infectious disease causing abortions

2.4 Epidemiology and Veterinary public health

2.4.1 Definition, aim, objectives and application of epidemiology

2.4.2 Epidemiological concept of disease control

2.4.3 Surveillance and monitoring of disease

2.4.4 Different types of epidemiological studies

2.4.5 Outbreak investigation

2.4.6 Prevalence rate, incidence rate and difference between them

2.4.7 Characteristics of host factor, agent factor and environmental factor

2.4.8 Different terminology used in epidemiology

- 2.4.9 Epidemiological reporting practices in Nepal
- 2.4.10 Cost analysis of the disease control programs
- 2.4.11 Risk analysis
- 2.4.12 Definition and objective of VPH
- 2.4.13 Different roles of VPH (Animal production, food hygiene and environmental protection)
- 2.4.14 Diagnosis , surveillance and control of various zoonotic disease
- 2.4.15 Meat inspection: anti-mortem, post-mortem and re-inspection
- 2.4.16 Different component and management of slaughterhouse
- 2.4.17 Milk hygiene
- 2.4.18 Concept of HACCP (Hazard analysis and critical control point)

2.5 Veterinary extension

- 2.5.1 Definition, philosophy and principles of extension education
- 2.5.2 Classification of extension teaching methods
- 2.5.3 Public private partnership
- 2.5.4 Social mobilization (CBOs, NGOs, and INGOs)

2.6 Clinical pathology and parasitology

- 2.6.1 Materials to be sent to laboratory for different disease diagnosis
- 2.6.2 Hematological examinations (TC, DC, ESR, PCV, RBC count, Blood smears, hemoglobin estimation)
- 2.6.3 Blood chemistry (estimation of blood glucose, serum and calcium)
- 2.6.4 Liver and kidney functions tests
- 2.6.5 Urine analysis (Routine test, test for detection of protein, Glucose, Ketone bodies, blood, bile pigment)
- 2.6.6 Blood and urine culture and antibiotic sensitivity tests
- 2.6.7 California mastitis tests
- 2.6.8 Important diagnostic tests: Different staining procedures, Tuberculin tests in animals, Test for pullorum disease (Rapid stained antigen), Brucellosis tests (RBPT and milk ring test) Test for rabies (Negri bodies test)
- 2.6.9 Post mortem examinations
- 2.6.10 Clinical parasitology (Examination of feces: direct smear method, concentration method and Floatation method)
- 2.6.11 Examination of skin scrapping
- 2.6.12 Bacterial, Viral and Fungal serological techniques
- 2.6.13 ELISA

3. Para-clinical subjects

20%

3.1 Veterinary Microbiology

- 3.1.1 General characteristics, properties, morphology, metabolism, growth and reproduction of bacteria, virus and fungus of various classes
- 3.1.2 Bacterial genetics, mutation and variations associated with virulence
- 3.1.3 Antigenicity, drug resistance
- 3.1.4 Principles of antiseptics, sterilization and disinfection

3.1.5 Resistance and immunity, antigen-antibody reaction and methods of detection Cell mediated and humoral immunity and immune mechanism. Immune system and its development.

Antigen-antibody reactions

3.1.6 Immunization of animals

3.1.7 Hypersensitivity-allergy

3.1.8 Bacteriophage, their description and application

3.1.9 Laboratory techniques for bacterial, viral, fungal culture and identification

3.1.10 Important diseases of domesticated animals caused by bacteria, viruses, rickettsia, chlamedia and fungi

3.2 Veterinary Parasitology

3.2.1 Parasites and Parasitism, Types of parasitism, host-parasite relationship

3.2.2 Importance of immunity against parasitic diseases

3.2.3 Classification and nomenclature of parasites and characteristics of different classes of parasites 3.2.4 Parasite development in the host system

3.2.5 Antiparasitic and anthelmintic medication, their use and abuse. Anthelmintic resistance

3.2.6 General description, classification, morphological characteristics and diseases caused by helminths, arthropods, insects and arachnida of domesticated animals and birds and their epidemiology, effects and methods of controlling them

3.2.7 Protozoon parasites of domesticated animals and birds, their classification, morphology and the diseases caused by them with epidemiology, effects and control strategies

3.2.8 Identification of different parasites and the methods of their culture and laboratory growth

3.3 Veterinary Pathology

3.3.1 Pathological responses of body to infection

3.3.2 Inflammation, classification and changes in inflammatory responses

3.3.3 Pathological disturbances and responses in circulatory system, cell metabolism, pigment metabolism

3.3.4 Disturbances in growth, Neoplasm and cancer

3.3.5 Healing, fever

3.3.6 Uroliths, choleliths, sialoliths, pancreoliths, enteroliths

3.3.7 Immune reactions. Hypersensitivity and auto immunity

3.3.8 Pathology of diseases of cardiovascular system, hemopoitic system, respiratory system, digestive system, urinary system, genital system, nervous system, endocrine system, sense organs and musculoskeletal system of domesticated animals and birds

3.3.9 Pathological changes in diseases caused by bacteria, viruses, fungus and parasites of domesticated animals and birds

3.4 Veterinary Pharmacology and Toxicology

3.4.1 Principles of drug activity, pharmacokinetics and pharmacodynamics of the drugs acting on central nervous system

3.4.2 Anesthetics, hypnotics, sedatives, tranquilizers, analgesics, analeptics, antipyretics, histamines and antihistamines

3.4.3 Anaesthetics, Neuromuscular blocking agents, Peripheral and Central muscle relaxants

- 3.4.4 Drugs acting on autonomic nervous system, neurohumoral transmission, adrenergic antagonists, cholinergic antagonists
- 3.4.5 Drugs acting on cardiovascular system, digestive system, respiratory system, urogenital system and skin and mucus membrane
- 3.4.6 Endocrine pharmacology
- 3.4.7 Vitamins
- 3.4.8 Antibacterial agents, antibiotics, antifungal agents, anthelmintics, antiprotozoal agents, antiviral and anticancer agents
- 3.4.9 Cytotoxic and immunosuppressive drugs
- 3.4.10 Hormones, prostaglandins, corticosteroids
- 3.4.11 Toxicity caused by metals and non metals, plants, commonly used drugs, agrochemicals, venomous bites and stings and environmental toxicity

4. Pre- clinical subjects

15%

4.1 Veterinary Anatomy

- 4.1.1 Gross anatomy of skeletal system, muscular system, nervous system, digestive system, urogenital system, circulatory system, respiratory system, reproductive system, glandular system and sense organs of domesticated animals and poultry
- 4.1.2 Introduction to cell structure, cell division and basic tissue of body. Histology of the organs of musculoskeletal, digestive, respiratory, urinary, reproductive, nervous, cardiovascular, endocrine, lymphoid, sense organs of domesticated animals and birds
- 4.1.3 General embryology, gametogenesis, fertilization, and development of fetus and body organs in domesticated animals and birds

4.2 Veterinary Physiology

- 4.2.1 General function and mechanism of action of various organs of circulatory, digestive, respiratory, urinary, reproductive, nervous, sensory system, endocrine system of domesticated animals and birds
- 4.2.2 Composition and function of tissue fluids
- 4.2.3 Mechanism of respiration and gaseous exchange

4.3 Biochemistry

- 4.3.1 Biochemistry of respiration, renal function and acid base balance
- 4.3.2 Biochemistry of digestion and metabolism of carbohydrate, fat, protein, nucleic acid, minerals and trace elements
- 4.3.3 Basal and energy metabolism
- 4.3.4 Biochemistry of hormones and enzymes
- 4.3.4 Diagnostic biochemistry
- 4.3.5 Immunochemistry
- 4.3.6 Biochemistry of cellular and sub cellular components
- 4.3.7 Biochemistry of carbohydrate, lipids, proteins
- 4.3.8 Diagnostic biochemistry

4.4 Animal Nutrition

4.4.1 Animal feed classification, nutritional requirements, feeding system and feeding standards of farm animals and birds

4.4.2 Functions of various nutrients and process of digestion in ruminants, non ruminants and birds

4.4.3 Ration formulation for farm livestock and birds

4.5 Livestock Production and Management

4.5.1 Care and management of farm livestock and poultry during different production and growth stages

4.5.2 Housing system for animals and birds

4.5.3 Characteristics of different breeds of farm livestock and birds

4.5.4 System of breeding and selection in farm livestock and poultry birds

4.5.5 Dairy and poultry production

5. Regulatory functions

15%

5.1 Out line of the World Trade Organization (WTOs), Sanitary and Phytosanitary (SPS) measures

5.2 Technical Barrier to Trade (TBT) Trade related aspects of Intellectual Property Rights (IPRs) agreement

5.3 Introduction to OIE, its objectives, function, structure, Standard setting procedures and different standards as set in Terrestrial Animal health code, Aquatic animal health code

5.4 Different standards for Biological preparation and standard Diagnostics Tests for various diseases of farm animals

5.5 Role of Official Veterinary Services in International Trade of animals, products of animal origin, food safety, import risk analysis, import permit

5.6 International Veterinary certifications, quarantine inspections and procedures

5.7 Animal Health Related Acts & Regulations

5.7.1 Animal Health and Livestock Service Act, 2055 and Regulation, 2056

5.7.2 Slaughterhouse and Meat inspection Act, 2055 and Regulation, 2057

5.7.3 Nepal Veterinary Council Act, 2055 and Regulation, 2057

5.7.4 Feed Act, 2033 and Regulation, 2051

5.7.5 Drug Act, 2035

5.7.6 Muluki Ain, 2019 (Concerning Provisions only)

5.7.7 National Park and Wildlife Conservation Act, 2029

5.7.8 Nepal Standard (Certification Mark) Act, 2037

5.8 Legal Duties of a Veterinarian, Examinations of animals for soundness, injuries, and sudden death.

5.9 Animal welfare

5.10 Detection of Frauds, Malicious poisoning

5.11 Differentiation of different species of blood, serum, semen, hair, hide and bones

द्वितीय पत्र :- पशु स्वास्थ्य सम्बन्धी विषय

Section A– 20 Marks

1. Introduction

20%

1.1 History and current status of veterinary services in Nepal

1.2 Current status of livestock production and production systems of livestock and poultry in Nepal

1.3 Indigenous and exotic breeds of livestock and poultry and their population in Nepal

1.4 Role of public and private sector in the promotion of veterinary services in Nepal

1.5 Recent HMG/N policies and plans related to livestock development, Provisions made by APP, Livestock Master Plan, Dairy development Plan and National Dairy Development Board for Livestock sector development

Section B– 50 Marks

2 Animal Health management

50%

2.1 Etiology, diagnosis and treatment of systemic diseases of farm livestock, pets, equine and poultry

2.2 Definition, etiology, epidemiology, pathogenesis, symptoms, diagnosis, treatment and control of notifiable Trans-boundary animal disease

2.3 Definition, etiology, epidemiology, pathogenesis, symptoms, diagnosis, treatment and control of economically important infectious disease of farm livestock, pets, equine and poultry

2.4 Etiology, epidemiology, pathogenesis, symptoms, diagnosis, treatment and control of economically important of parasitic disease (ecto and endo parasites) of farm livestock, pets, equine and poultry

2.5 Zoonotic disease of public health importance

2.6 General control measures against parasitic and infectious diseases of animals and birds.

2.7 Management of production and metabolic disease of farm livestock

2.8 Definition, etiology, diagnosis, treatment and management of sub-fertility, infertility, sterility and abortion in farm livestock under Nepalese condition

2.9 Importance of breeding management, A.I, and pregnancy diagnosis in farm animals

2.10 Reproductive disorder and its management in farm livestock

2.11 Current practices and importance of epidemiological reporting, and animal health information system

2.12 Outbreak investigation and epidemic control

2.13 Laboratory diagnosis of important disease of animals and poultry

2.14 Prospects and constrains of vaccine production and use in Nepal

2.15 Veterinary drugs administration, their uses and abuses

Section C– 20 Marks

3. International standard, quality and regulation

20%

3.1 Slaughter house management and meat inspection principles and procedures

3.2 Out line of the World Trade Organization (WTOs), Sanitary and Phytosanitary measures (SPS)

3.3 Introduction to OIE (World Animal Health Organization, its objectives, function, and its role in standard setting

3.4 Role of Official Veterinary Services in International Trade of animals, products of animal origin, food safety, import risk analysis, import permit, International Veterinary certifications, quarantine inspections and procedures

3.5 Animal health related Acts & Regulations:

3.5.1 Animal Health and Livestock Service Act, 2055 and regulation, 2056

3.5.2 Slaughterhouse and Meat inspection Act, 2055 and regulation, 2057

3.5.3 Nepal Veterinary Council Act, 2055 and regulation, 2057

3.5.4 Feed Act, 2033 and regulation, 2051

3.5.5 Drug Act, 2035

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3.5.7 National Park and Wildlife Conservation Act, 2029

3.5.8 Nepal Standard (Certification Mark) Act, 2037

3.6 Legal Duties of a Veterinarian, Examinations of animals for soundness, injuries, and sudden death

3.7 Animal welfare

3.8 Detection of Frauds, Malicious poisoning

3.9 Differentiation of different species of blood, serum, semen, hair, hide and bones

4. Planning and management of veterinary/laboratory services 10%

4.1 Management of veterinary investigation laboratory

4.2 Planning and management of district veterinary services, livestock production services and livestock product marketing services

4.3 Herd health management and disease prevention

4.4 National disease control program

4.5 Planning and management of veterinary projects

Sample Question

1. *Haemonchus contortus* parasite in sheep is present in: (A) Rumen (B) Abomasum (C) Caecum (D) Colon **Correct Answer :- (B)**
2. Which of the following disease is not grouped in TADs (A) PPR (B) FMD (C) RP (D) Mastitis **Correct Answer :- (D)**
3. Milk fever is a (A) Parasitic disease (B) Infectious disease (C) Metabolic disease (D) None of the above **Correct Answer :- (C)**
4. The average normal body temperature of a cattle is (A) 1010C (B) 990 F (C) 1010F (D) 1040F **Correct Answer :- (C)**
5. Loss of blood from the body will result to (A) Anemia (B) Hematoma (C) Hyperemia (D) Carcinoma **Correct Answer :- (A)**
6. Deficiency of calcium in the diet will result to (A) Rickets (B) Distortion of jaw (C) Enlargement of join (D) All of the above **Correct Answer :- (D)**

Sample Questions

- Q.1 What are the advantages and disadvantages of privatization of veterinary services in Nepal? How could veterinary services be privatized in Nepalese condition?
- Q.2 Describe the etiology, epidemiology and control strategy of foot and mouth disease (FMD) in farm livestock in Nepal.
- Q.3 Describe the epidemiology, clinical effects and control strategy of one of the economically important parasitic disease of farm livestock in Nepal.
- Q.4 Describe the composition, role and duties of World Animal Health organization (OIE).
- Q.5 Design the project for the control of an infectious disease of farm livestock in your district

-समाप्त-