



पशु चिकित्सक पद, छैठौं तहको लागि तय गरिएको पाठ्यक्रम

परीक्षा योजना (Examination Scheme)

प्रथम चरण:- लिखित परीक्षा (Written Examination)

पूर्णाङ्क:- २००

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

द्वितीय चरण: अन्तर्वार्ता

पूर्णाङ्क:- ३०

पत्र/विषय	पूर्णाङ्क
अन्तर्वार्ता	३०

द्रष्टव्य

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुबै हुनेछ ।
- प्रथमपत्र र द्वितीयपत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- वस्तुगत बहुबैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर वापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस वापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- बहुबैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको Memory युक्त विद्युतीय उपकरण जस्तै मोबाइल फोन (Mobile), क्याल्कुलेटर (Calculator), Smart घडी जस्ता वस्तुहरू प्रयोग गर्न पाइने छैन ।
- विषयगत प्रश्नहरूको हकमा तोकिएको अंकको एउटा लामो प्रश्न वा एउटै प्रश्न दुई वा दुईभन्दा बढी भाग (Two or more parts of a single Question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिनेछ ।
- द्वितीय पत्रमा विषयगत प्रश्न हुनेका हकमा प्रत्येक खण्ड Section का लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्ड उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भएतापनि पाठ्यक्रममा परेका कानुन ऐन नियम तथा नीतिहरू, यो पाठ्यक्रम स्वीकृत हुँदा कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनुपर्नेछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।

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

1. **General Awareness and Contemporary Issues (25 x 1 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 and Provincial periodical policies and plans
 - 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, organizational 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, importance and compliance 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 organizational structure of veterinary services
 - 1.18. Personnel management: requisitions, development
2. **General Ability Test (25 x 1 Mark = 25 Marks)**
 - 2.1 **Verbal Ability Test (8 x 1 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 (9 x 1 Mark = 9 Marks)**

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 (8 x 1 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

Part (II) : - General Technical Subject (50 Marks)

10%

1. Introduction

- 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 GoN policies and plans related to livestock development
- 1.6 Provisions made by APP, Livestock Master Plan and Dairy Development Plan for Livestock sector development

40%

2. Clinical subjects

- 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; Clostridiosis; Brucellosis; Listeriosis; Leptospirosis; Mastitis; Strangles; Glanders; Degenerative disease; Salmonellosis; Mycoplasmosis; Mad cow disease; Rabies; Scrapie; Canine distemper; Lumpy skin disease, ICH
 - 2.1.7 Etiology, epidemiology, transmission, pathogenesis, symptoms, diagnosis, treatment, and control of the common disease caused by Chlamydia, Rickettsia 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; BVD; CRD; Infectious bursal disease; Infectious bronchitis; Marek's disease; Avian leucosis complex; Egg drop syndrome; Leaky 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
- 2.1.12 Concept on emerging and reemerging diseases

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- isterectomy, 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 (Groups, CBOs, NGOs, and INGOs)
- 2.5.5 Role of cooperatives in veterinary services.

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 Flootation 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, hemopoietic 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 Anesthetics, 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, anthelmintic, 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 nonmetals, plants, commonly used drugs, agrochemicals, venomous bites and stings and environmental toxicity

4. Pre- clinical subjects

16%

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

14%

- 5.1 Outline 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 Provincial animal health and livestock service act & regulations
 - 5.7.2 Slaughterhouse and Meat inspection Act and Regulation
 - 5.7.3 Nepal Veterinary Council Act, 2055 and Regulation, 2057
 - 5.7.4 Feed Act and Regulation
 - 5.7.5 Drug Act, 2035
 - 5.7.6 National Park and Wildlife Conservation Act
 - 5.7.7 Nepal Standard (Certification Mark) Act
- 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 (Paper II) : Technical Subject

Section A- 30 Marks

20%

Introduction

- 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 GoN 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
- 1.6. Role of cooperatives in veterinary services
- 1.7. Role and coordination of Provincial and local Governments in veterinary services

Planning and management of veterinary/laboratory services 10%

1. Management of veterinary investigation laboratory
2. Planning and management of district veterinary services, livestock production services and livestock product marketing services
3. Herd health management and disease prevention
4. National disease control program
5. Planning and management of veterinary projects

Section B- 50 Marks

50%

Animal Health management

1. Etiology, diagnosis and treatment of systemic diseases of farm livestock, pets, equine and poultry
2. Definition, etiology, epidemiology, pathogenesis, symptoms, diagnosis, treatment and control of notifiable Trans-boundary animal disease
- 3.3. Definition, etiology, epidemiology, pathogenesis, symptoms, diagnosis, treatment and control of economically important infectious disease of farm livestock, pets, equine and poultry
- 3.4. 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
- 3.5. Zoonotic disease of public health importance
- 3.6. General control measures against parasitic and infectious diseases of animals and birds.
- 3.7. Management of production and metabolic disease of farm livestock
- 3.8. Definition, etiology, diagnosis, treatment and management of sub-fertility, infertility, sterility and abortion in farm livestock under Nepalese condition
- 3.9. Importance of breeding management, A.I, and pregnancy diagnosis in farm animals
- 3.10. Reproductive disorder and its management in farm livestock
- 3.11. Current practices and importance of epidemiological reporting, and animal health information system
- 3.12. Outbreak investigation and epidemic control
- 3.13. Laboratory diagnosis of important disease of animals and poultry
- 3.14. Prospects and constraints of vaccine production and use in Nepal
- 3.15. Veterinary drugs administration, their uses and abuses
- 3.16. Concept on emerging and reemerging diseases

Section C– 20 Marks

International standard, quality and regulation

20%

1. Slaughter house management and meat inspection principles and procedures

2. Outline of the World Trade Organization (WTOs), Sanitary and Phytosanitary measures (SPS)

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

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

Animal health related Acts & Regulations:

4.5.1. Provincial Animal Health and Livestock Service Act and regulation

4.5.2. Slaughterhouse and Meat inspection Act

4.5.3. Nepal Veterinary Council Act, 2055 and regulation, 2057

4.5.4. Feed Act and regulation

4.5.5. Drug Act 2035

4.5.6. National Park and Wildlife Conservation Act

4.5.7. Nepal Standard (Certification Mark) Act

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

Detection of Frauds, Malicious poisoning

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

लोक सेवा आयोग
नेपाल स्वास्थ्य सेवा, हेल्थ इन्स्पेक्सन समूहको सातौं तहको खुला तथा आन्तरिक प्रतियोगितात्मक लिखित
परीक्षाको पाठ्यक्रम
द्वितीय पत्र - हेल्थ इन्स्पेक्सन सम्बन्धी

Section A- 30 Marks

- | | | |
|----------|---|------------|
| 1 | Health Policies Issues | 10% |
| | 1.1 National Health Policy 1991 | |
| | 1.2 Current National Population Policy | |
| | 1.3 Second Long Term Health Plan (1997-2017) | |
| | 1.4 Health Sector in Current Five Year Plan | |
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 | | |
| 4 | Health Issues and Regulations | 20% |
| | 4.1 Health act, 2053 and Health regulation, 2054 | |
| | 4.2 Current financial administration regulation | |
| | 4.3 Local governance and decentralization in health | |
| | 4.4 Health and human right | |
| | 4.5 Professional council and related regulations | |
| | 4.6 Ethical issues in health | |

Section B- 30 Marks

- | | | |
|----------|--|------------|
| 2 | Introduction, Objectives, Strategies, Targets and Current Status of National Health programs | 30% |
| | 2.1 Family Planning, Safe Motherhood, Immunization Program, Nutrition, Integrated management of Childhood illness (IMCI), Malaria, Tuberculosis, Leprosy, Sexually transmitted Infections (STI) and HIV/AIDS | |
| | 2.2 National health training center: basic, refresher and other continuous medical education programme | |
| | 2.3 National Health Education Information and Communication Center: Critical over view of functions and roles | |
| | 2.4 Development of District Health Profiles | |
| | 2.5 Female Community Health Volunteers Programme (FCHV) | |
| | 2.6 Primary Health Care Out-reach Programme (PHC-ORC) | |
| | 2.7 Disaster Management and Early Warning Reporting System(EWARS) | |
| | 2.8 Health Sector Reform Program: Strategy and planning programs | |
| | 2.9 Health Economics and Financing Unit (HEFU) | |
| | 2.10 Health Management Information System (HMIS) | |
| | 2.11 Logistic Management Information System (LMIS) | |
| | 2.12 Human Resource Information Center (HURIC) | |

Section C- 20 Marks

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|----------|---|------------|
| 3 | Management of Public Health Programme in the District with Special Reference to | 20% |
| | 3.1 Family Planning, Safe Motherhood, Immunization Program, Nutrition, Integrated management of Childhood illness (IMCI), Malaria, Kala-azar, J.E. and other Vector borne diseases, Tuberculosis, Leprosy, Sexual transmission diseases (STD) and HIV/AIDS. | |
| | 3.2 Training activities in the district; | |
| | 3.3 Health education, information and communication activities in the District | |
| | 3.4 Management of Camps | |

Section D- 20 Marks

5 Management Issues in Nepal Health Services

20%

- 5.1 Personnel management: concept, principles, nature
- 5.2 Human resource management: concept, functions and different aspects
- 5.3 Community organization: Concepts, principles and process
- 5.4 Supervision, monitoring and evaluation of health care system: Principles, practice and importance
- 5.5 Inter and intra-sectoral coordination in health services
- 5.6 Indigenous and traditional health care system including Ayurveda and other system: Concepts, status and their analytical study
- 5.7 Analytical study of organizational structure of Ministry of Health and Population and functions

द्वितीय पत्रहरूका एकाइहरूबाट सोधिने प्रश्नसंख्या निम्नानुसार हुनेछ :

द्वितीय पत्रका खण्ड	A		B	C	D
द्वितीय पत्रका एकाई	1	4	2	3	5
प्रश्न संख्या	1	2	3	2	2

विषयगत नमूना प्रश्नहरू (Sample questions)

1. Discuss briefly the objectives and strategies of second long term health plan (1997-2017). 10
2. Write the objective, strategy, targets and current status of Tuberculosis programme of Nepal. 10
3. What is early warning reporting system (EWARS)? Discuss its importance and applications. 10

लोक सेवा आयोग
नेपाल स्वास्थ्य सेवा, हेल्थ इन्स्पेक्सन समूहको सातौँ तहको खुला तथा आन्तरिक प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

नेपाल आर्थिक योजना तथा तथ्याङ्क, इन्जिनियरिङ्ग, कृषि, वन, विविध र शिक्षा सेवाका सबै समूह/उपसमूह, राजपत्रांकित तृतीय श्रेणी र एवं स्वास्थ्य सेवाको सातौँ र आठौँ तहका पदहरूमा प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र लिइने **सामूहिक परीक्षण (Group Test)** को लागि

सामूहिक छलफल (Group Discussion)

यस प्रयोजनको लागि गरिने परीक्षण १० पूर्णाङ्क र ३० मिनेट अवधिको हुनेछ जुन नेताविहिन सामूहिक छलफल (Leaderless Group Discussion) को रूपमा अवलम्बन गरिने छ । दिइएको प्रश्न वा Topic का विषयमा पालैपालोसँग निर्दिष्ट समयभित्र समूहबीच छलफल गर्दै प्रत्येक उम्मेदवारले व्यक्तिगत प्रस्तुति (Individual Presentation) गर्नु पर्नेछ । यस परीक्षणमा मूल्याङ्कनको लागि देहाय अनुसारको ३ जना भन्दा बढीको समिति रहनेछ ।

आयोगका सदस्य	-	अध्यक्ष
आयोगका सदस्य	-	सदस्य
मनोविज्ञ	-	सदस्य
दक्ष/विज्ञ (१ जना)	-	सदस्य

सामूहिक छलफलमा दिइने नमुना प्रश्न वा Topic

उदाहरणको लागि - उर्जा संकट, गरीबी निवारण, स्वास्थ्य बीमा, खाद्य सुरक्षा, प्रतिभा पलायन जस्ता Topics मध्ये कुनै एक Topic मात्र दिइनेछ ।

लोक सेवा आयोग

नेपाल स्वास्थ्य सेवा, हेल्थ इन्स्पेक्सन समूह, सतौ तहको 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	हेल्थ इन्स्पेक्सन	१००	४०	वस्तुगत बहुवैकल्पिक (MCQs)	१००X१ = १००	१ घण्टा १५ मिनेट
द्वितीय	सम्बन्धी	१००	४०	विषयगत (Subjective)	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 हुनेछन ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- प्रथम तथा द्वितीय पत्रहरूका एकाइहरूबाट सोधिने प्रश्नसंख्या निम्नानुसार हुनेछ :

प्रथम पत्रका एकाई	1	2	3	4	5	6	7	8	9	10	11	12
प्रश्न संख्या	5	20	10	5	5	20	5	5	5	10	5	5
द्वितीय पत्रका खण्ड	A				B			C			D	
द्वितीय पत्रका एकाई	1	4			2			3			5	
प्रश्न संख्या	1	2			3			2			2	

- 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 ।
- यस भन्दा अगाडि लागू भएको माथि उल्लिखित समूहको पाठ्यक्रम खारेज गरिएको छ ।
- पाठ्यक्रम लागू मिति :- २०६३/११ देखि (२०७२/०७/२४ को निर्णय अनुसार सामूहिक परीक्षण समावेश)
- मिति २०७०/२/९ मा सातौं तहमा कायम गर्ने निर्णय ।

प्रथम पत्र :- हेल्थ इन्स्पेक्सन सम्बन्धी

- | | | |
|-----------|---|------------|
| 1 | Health and Public Health | 5% |
| | 1.1. Meaning of health and disease, Factors that influence health, concept of health and disease, Dimension of disease, Measurement of health, disease and well being | |
| | 1.2. Public health concept, Historical development and changing concept | |
| 2 | Health Planning and Management | 20% |
| | 2.1. Approaches, models, methods and practices | |
| | 2.2. Need assessment, planning cycle, Planning, monitoring and evaluation | |
| | 2.3. Strategic and operational planning | |
| | 2.4. Inventory management | |
| | 2.5. Drug management | |
| | 2.6. Financial management | |
| | 2.7. Health economics, Health care financing: Basic concepts and economic evaluation of health care services | |
| | 2.8. Health care need assessment | |
| | 2.9. Decentralization in health management | |
| | 2.10. Quality assurance in health care | |
| 3 | General Epidemiology | 10% |
| | 3.1. Definition, concepts, approaches, aims, and use of epidemiology | |
| | 3.2. Epidemiological methods, Incidence, Prevalence, association and causation, disease prevention and control | |
| | 3.3. Epidemiology of communicable and non communicable diseases | |
| | 3.4. Dynamics of disease transmission | |
| | 3.5. Investigation of an epidemics | |
| | 3.6. Screening of diseases | |
| | 3.7. Health indicators | |
| 4 | Health Statistics | 5% |
| | 4.1. Sources of health information, Health information system | |
| | 4.2. Tabulation, graphic and diagrammatic presentation of data | |
| | 4.3. Statistical methods; Measures of central tendency, Measures of variability | |
| | 4.4. Sampling size, Sampling survey and test of significance, correlation and regression | |
| 5. | Demography | 5% |
| | 5.1. Population trends-world and national | |
| | 5.2. Measures of population dynamics | |
| | 5.3. Factors affecting fertility, mortality and migration | |
| | 5.4. Urbanization, Life expectation | |
| 6 | Applied Epidemiology and Disease Control | 20% |
| | 6.1. Epidemiology, Prevention and control of communicable diseases including: Measles, Diphtheria, Whooping cough, Acute respiratory tract infection, Rubella, Mumps, Influenza, Tuberculosis, Viral hepatitis, Food poisoning, Typhoid fever, Intestinal worms, Acute diarrhoeal diseases, Filariasis, Leishmaniasis, Malaria, Japanese encephalitis, Rabies, Tetanus, Trachoma, Leprosy, STD and HIV/AIDS | |
| | 6.2. Prevention and control of non-communicable diseases | |
| | 6.3. Concept of Control, elimination and eradication of diseases | |

7	Food and Nutrition	5%
7.1	Nutritional profiles	
7.2	Nutritional problems	
7.3	Assessment of nutritional status	
7.4	Food toxication, additives and fortification;	
8	Environmental Health	5%
8.1	Management and control of basic and fundamental factors; Water, Air, Lighting, Noise, Housing	
8.2	Solid waste disposal and control	
8.3	Excreta disposal and control	
8.4	Medical entomology-Mosquito, housefly, sand fly, lice, fleas, bugs etc. control	
8.5	Insecticides safe use and resistance	
8.6	Rodents control	
9	Occupational Health	5%
9.1	Occupational environment and safety	
9.2	Occupational hazards	
9.3	Management and prevention of occupational hazards	
9.4	Measures for general health protection of workers	
10	Health Education and Health Promotion	10%
10.1	Concept, Objectives and principles and their importance	
10.2	Methods of health education	
10.3	Health education medias and production	
10.4	Behavior change communication (BCC)	
10.5	Community organization and participation	
10.6	Communication and information: concepts and importance	
10.7	School health program: concepts, areas and importance	
11	Primary Health Care (PHC), Essential Health Care Services (EHCS) and Millennium Development Goals (MDGs)	5%
11.1	Concept, Components, Status and Prospects	
12	International Health	5%
12.1	External development partners and their priorities	
12.2	UN agencies: WHO, UNICEF, UNDP, UNFPA, UNAIDS and World Bank	
12.3	Bilateral agencies working in Nepal: USAID, JICA, GTZ, DFID, SDC, CIDA, AUSAID, NORAD, FINIDA, KOIKA	

लोक सेवा आयोग
नेपाल स्वास्थ्य सेवा, हेल्थ इन्स्पेक्सन समूह, सतौ तहको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम
वस्तुगत बहुउत्तर नमूना प्रश्नहरू (Sample questions)

1. Which of the following is the tertiary protection

- A) Health Promotion
- B) Specific Protection
- C) Early Diagnosis and treatment
- D) Disability limitation

Correct answer: (D)

2. Health for all the year 2000 AD is

- A) Targets
- B) Strategy
- C) Goals
- D) Objectives

Correct answer: (C)

3. The type of epidemiology which deals with risk factor of diseases is

- A) Descriptive
- B) Analytical
- C) Experimental
- D) Interventional

Correct answer: (B)

4. Keeping the frequency of disease within acceptable limit is called

- A) Control
- B) Eradication
- C) Surveillance
- D) Treatment

Correct answer: (A)

5. The first person detected as sick during an epidemic is called

- A) Primary case
- B) Secondary case
- C) Contact case
- D) Index case

Correct answer: (D)

6. Prevention of TB infection in a community is estimated by

- A) Tuberculin test
- B) Sputum microscopy
- C) Sputum Culture
- D) Chest X ray

Correct answer: (A)

7. Highest source of vitamin 'C' is

- A) Orange
- B) Amla
- C) Lemon
- D) Grapes

Correct answer: (B)

8. Chlorination of water kills

- A) Bacteria
- B) Spores
- C) Protozoal cysts
- D) Helminthes ova

Correct answer: (A)

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याव टेक्नोलोजी समूह, चौथो तह ल्याव असिष्टेण्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा:— यस पाठ्यक्रम योजनालाई तीन चरणमा विभाजन गरिएको छ ।

प्रथम चरण:- लिखित परीक्षा

पूर्णाङ्क:- १००

द्वितीय चरण:- लिखित परीक्षा

पूर्णाङ्क:- १००

अन्तिम चरण:- अन्तर्वार्ता

पूर्णाङ्क:- ३०

लिखित परीक्षा योजना (Written Examination)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्न संख्या × अङ्कभार	समय
प्रथम चरण							
प्रथम	सामान्यज्ञान र सार्वजनिक व्यवस्थापन (General Awareness & Public Management)	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक (MCQs)	२० प्रश्न × २ अङ्क = ४०	४५ मिनेट
	सेवा सम्बन्धी कार्य ज्ञान (Job Based-Knowledge)					३० प्रश्न × २ अङ्क = ६०	
द्वितीय चरण							
द्वितीय	सेवा सम्बन्धी कार्य ज्ञान (Job Based-Knowledge)	१००	४०	विषयगत (Subjective)	छोटो उत्तर (Short Answer) लामो उत्तर (Long Answer)	१२ प्रश्न × ५ अङ्क = ६० ४ प्रश्न × १० अङ्क = ४०	२ घण्टा १५ मिनेट

अन्तिम चरण:-

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	३०	मौखिक अन्तर्वार्ता (Oral Interview)

द्रष्टव्य:-

- यो पाठ्यक्रम योजनालाई प्रथम चरण, द्वितीय चरण र अन्तिम गरी तीन चरणमा विभाजन गरिएको छ ।
- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
- लिखित परीक्षामा यथासम्भव निम्नानुसार प्रश्नहरू सोधिनेछ ।

प्रथम पत्र	खण्ड क		खण्ड ख			
एकाइ	१	२	३	४	५	६
प्रश्न संख्या	१०	१०	८	८	७	७

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याव टेक्नोलोजी समूह, चौथो तह ल्याव असिष्टेण्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

द्वितीय पत्र	खण्ड क		खण्ड ख	
एकाइ	१	२	३	४
प्रश्न संख्या	६ प्रश्न x ५ अङ्क = ३० अङ्क र २ प्रश्न x १० अङ्क = २० अङ्क		६ प्रश्न x ५ अङ्क = ३० अङ्क र २ प्रश्न x १० अङ्क = २० अङ्क	

४. 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 ।
५. प्रथम पत्र र द्वितीय पत्रको लिखित परीक्षा छुट्टा छुट्टै हुनेछ ।
६. यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भएतापनि 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 सम्झनु पर्दछ ।
७. बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको मेमोरीयुक्त विद्युतीय उपकरणहरू जस्तै: क्याल्कुलेटर मोबाइल फोन, स्मार्ट घडी लगायतका कुनै पनि वस्तुहरू प्रयोग गर्न पाइने छैन ।
८. विषयगत प्रश्नहरूको हकमा तोकिएको अंकको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुईभन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिनेछ ।
९. परीक्षामा सोधिने प्रश्नसंख्या, अङ्क र अङ्क भार यथासम्भव सम्बन्धित पत्र/विषयमा दिइए अनुसार हुनेछ ।
१०. विषयगत प्रश्न हुने पत्र/विषयका प्रत्येक खण्डका लागि छुट्टा-छुट्टै उत्तरपुस्तिकाहरू हुनेछन । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डको उत्तरपुस्तिकामा लेख्नु पर्नेछ ।
११. प्रथम चरणको लिखित परीक्षामा न्युनतम उत्तीर्णाङ्क प्राप्त गरेका उम्मेदवारहरूलाई मात्र द्वितीय चरणको लिखित परीक्षामा सम्मिलित गराइनेछ ।
१२. प्रथम चरणको लिखित परीक्षामा प्राप्त गरेको प्राप्ताङ्क र द्वितीय चरणको लिखित परीक्षामा न्युनतम उत्तीर्णाङ्क प्राप्त गर्ने उम्मेदवारहरूले प्राप्त गरेको प्राप्ताङ्क जोडी प्राप्त हुने कूल प्राप्ताङ्कको योग्यताका आधारमा बर्णानुक्रम अनुसार लिखित परीक्षाको नतिजा प्रकाशन गरिनेछ ।
१३. लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र अन्तर्वार्तामा सम्मिलित गराइनेछ ।
१४. प्रथम तथा द्वितीय चरणको लिखित परीक्षाको प्राप्ताङ्क र अन्तर्वार्ताको प्राप्ताङ्कको कुल अङ्कको योगका आधारमा योग्यताक्रम निर्धारण गरी माथिल्लो योग्यताक्रमका आधारमा अन्तिम नतिजा प्रकाशित गरिनेछ ।
१५. यसभन्दा अगाडि लागु भएको माथी उल्लेखित सेवा समूह/उपसमूहको पाठ्यक्रम खारेज गरिएको छ ।
१६. पाठ्यक्रम लागू मिति:-- २०८१।१०।२३

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याव टेक्नोलोजी समूह, चौथो तह ल्याव असिष्टेण्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

प्रथम पत्र (Paper I):

सामान्य ज्ञान र सार्वजनिक व्यवस्थापन तथा सेवा सम्बन्धी कार्य-ज्ञान

पूर्णाङ्क: १००

खण्ड क (Section A)

सामान्य ज्ञान र सार्वजनिक व्यवस्थापन

(General Awareness & Public Management)

(२० प्रश्न × २ अङ्क = ४० अङ्क)

१. सामान्य ज्ञान (General Awareness) (१० प्रश्न × २ अङ्क = २० अङ्क)

- १.१. नेपालको भौगोलिक अवस्था, प्राकृतिक स्रोत र साधनहरू
- १.२. नेपालको ऐतिहासिक, सांस्कृतिक र सामाजिक अवस्था सम्बन्धी जानकारी
- १.३. लुम्बिनी प्रदेशको भौगोलिक, ऐतिहासिक, सांस्कृतिक र सामाजिक अवस्था सम्बन्धी जानकारी
- १.४. नेपालको आर्थिक अवस्था र चालु आवधिक योजना सम्बन्धी जानकारी
- १.५. लुम्बिनी प्रदेशको आर्थिक अवस्था र चालु आवधिक योजना सम्बन्धी जानकारी
- १.६. नेपालको संविधान (भाग १ देखि ५ सम्म र अनुसूचीहरू)
- १.७. संयुक्त राष्ट्र संघ र सार्क सम्बन्धी जानकारी
- १.८. राष्ट्रिय महत्वका समसामयिक गतिविधिहरू

२. सार्वजनिक व्यवस्थापन (Public Management) (१० प्रश्न × २ अङ्क = २० अङ्क)

- २.१. कार्यालय व्यवस्थापन (Office Management)
 - २.१.१. कार्यालय: (Office) परिचय, महत्व र कार्य
 - २.१.२. सहायक कर्मचारीका गुणहरू
 - २.१.३. कार्यालय स्रोत साधन (Office Resources): परिचय र प्रकार
 - २.१.४. कार्यालयमा सञ्चारको महत्व, किसिम र साधन
 - २.१.५. कार्यालय कार्यविधि (Office Procedure): पत्र व्यवहार (Correspondence), दर्ता र चलानी (Registration & Dispatch), परिपत्र (Circular), तोक आदेश (Order), टिप्पणी लेखन र अभिलेख व्यवस्थापन (Record Management)
- २.२. निजामती सेवा ऐन, २०४९ र नियमावली, २०५० तथा प्रदेश निजामती सेवा ऐन, २०८० र नियमावली, २०८० र स्थानीय निजामती सेवा ऐन, २०८१ मा रहेका देहायका व्यवस्थाहरू
 - २.२.१. निजामती सेवा, प्रदेश निजामती सेवा र स्थानीय निजामती सेवाको गठन, कर्मचारीको नियुक्ति, बिदा, विभागीय सजाय, अवकाश र सुविधा
 - २.२.२. कर्मचारीले पालन गर्नुपर्ने आचरण
- २.३. सार्वजनिक बडापत्र (Public/citizen Charter) महत्व र आवश्यकता
- २.४. स्थानीय सरकार सञ्चालन ऐन, २०७४ (परिच्छेद ३: गाउँपालिका तथा नगरपालिकाको काम कर्तव्य र अधिकार)
- २.५. भ्रष्टाचार निवारण ऐन, २०५९ (परिच्छेद २: भ्रष्टाचारको कसुर र सजाय सम्बन्धी व्यवस्था)

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, चौथो तह ल्याब असिष्टेन्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

खण्ड ख (Section B)

सेवा सम्बन्धी कार्य ज्ञान

(Job Based-Knowledge)

(३० प्रश्न * २ अङ्क = ६० अङ्क)

3. Microbiology

3.1. Bacteriology

- 3.1.1. General knowledge about Bacteriology
- 3.1.2. Morphology of Bacteria (size, shape)
- 3.1.3. Differentiation of bacteria (cocci, bacilli)
- 3.1.4. Sample collection (pus, urine, throat swab, sputum, blood)
- 3.1.5. Principle of Gram's stain, microscopic identification of Gram +ve and Gram -ve bacteria.
- 3.1.6. Staining- Use of different dye and its principle, method of preparation.
- 3.1.7. Mycobacteria- M. tuberculosis/M.leprae, sample collection, staining and recording result.
- 3.1.8. Preparation of sputum smear
- 3.1.9. Safety precaution and proper disposal of infected materials.
- 3.1.10. Culture media-General introduction to different type of culture media.
- 3.1.11. General introduction to sterilization- by dry heat, moist heat, formaldehyde
- 3.1.12. Cultural technique of blood, urine, sputum, throat swab, stool
- 3.1.13. Use of disinfectants-preparation of disinfectant solution.

3.2. Parasitology

- 3.2.1. Introduction to parasitology,
- 3.2.2. Terms used in parasitology,
- 3.2.3. Classification of parasites
- 3.2.4. Helminthic parasites (Ascaris lumbricoides, Ancylostoma duodenale, Necator Americans, Trichiuris trichiura, Strongyloides stercoralis, Enterobius vermicularis, Taenia solium, Taenia saginata, Hymenolepis nana, life cycle, mode of transmission, laboratory diagnosis, prevention and control measures.
- 3.2.5. Protozoal parasites (Giardia lamblia, Entamoeba histolytica, Entamoeba coli, Balantidium coli, Trichomonas vaginalis, Trichomonas hominis) - life cycle, mode of transmission, laboratory diagnosis, prevention and control measures.
- 3.2.6. Dysentery (amoebic and bacillary dysentery).
- 3.2.7. Difference between of Entamoeba coli & Entamoeba histolytica
- 3.2.8. Laboratory procedure:
 - 3.2.8.1. Collection of samples.
 - 3.2.8.2. Preparation of reagents: normal saline solution, Iodine solution, 33% Zinc sulphate solution.
 - 3.2.8.3. Stool examination- routine and concentration method, interpretation of results.
 - 3.2.8.4. Occult blood test.
 - 3.2.8.5. Disposal of waste materials

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, चौथो तह ल्याब असिष्टेन्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

4. Hematology

- 4.1. Composition of blood, plasma, serum and whole blood.
- 4.2. Collection of blood sample – finger prick, vein puncture, ear lobe prick.
- 4.3. Anticoagulants, types of anticoagulants, preparation of Anticoagulant vials.
- 4.4. Use of instruments – Sahli's haemoglobinometer, haemocytometers, diluting pipettes, Neubaur counting chamber, ESR tubes, importance of bulk dilution, preparation of blood diluting fluid.
- 4.5. Preparation of thin and thick blood smears.
- 4.6. Total WBC, RBC and platelet count.
- 4.7. Sources of error in blood count.
- 4.8. Differential WBC count.
- 4.9. ESR estimation (Wintrobe and Westergren method).
- 4.10. Hemoglobin estimation, preparation of standard curve.
- 4.11. Preparation of Drabkin's Solution.
- 4.12. Use of Sahli Haemoglobinometer
- 4.13. Preparation of N/10 HCL.
- 4.14. Performance of –BT, CT,
- 4.15. Staining procedure – Preparation and use of Wright's stain and its principle.
- 4.16. Blood parasites – Malaria, filaria,
- 4.17. Perform blood grouping
- 4.18. Sources of errors in above hematological tests.
- 4.19. Quality control in hematology.

5. Biochemistry

- 5.1. Basic chemistry- matter, substance, atom, molecules, element and compound.
- 5.2. Solution- Preparation of normal solution
- 5.3. Cleaning of glass-wares
- 5.4. Instrument: Colorimeter, Centrifuge, Balance, Refrigerator
- 5.5. Law of colorimetry-Beer's and Lambert's law
- 5.6. Collection of specimens for biochemical tests
- 5.7. Estimation of Blood glucose preparation of standard curve interpretation of results, source of errors.
- 5.8. Estimation of Blood Urea, interpretation of result, source of errors.
- 5.9. Preparation of reagents for Glucose, Urea,
- 5.10. Estimation of Serum amylase, and calculation of results.
- 5.11. CSF – Glucose, Protein, Cell count, Gram's stain, AFB stain

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, चौथो तह ल्याब असिष्टेन्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

6. Miscellaneous

6.1. Urinalysis

- 6.1.1. Importance of urinalysis
- 6.1.2. Collection of specimens
- 6.1.3. Preservation of urine for routine & culture purpose.
- 6.1.4. Examination of urinary deposit
- 6.1.5. Urine albumin test by Heat and Acetic Acid method, Sulfo Salicylic Acid method & Strip method.
- 6.1.6. Urinary glucose test by Benedict's & strip methods.
- 6.1.7. Preparation of Benedict's reagents.

6.2. Semen analysis

- 6.2.1. Volume
- 6.2.2. Motility
- 6.2.3. Sperm count

6.3. Instrumentation

- 6.3.1. Microscope- use of microscope, parts of microscope, handling of microscope.
- 6.3.2. Use of incubators, hot air oven, water bath, refrigerator, chemical balance, Colorimeter.
- 6.3.3. Basic knowledge of glass-ware (test tube, flask, measuring cylinder).

6.4. Immunology

- 6.4.1. Perform VDR L and HIV tests.
- 6.4.2. Definition of precipitation, agglutination, flocculation.

6.5. Quality control in following tests

- 6.5.1. Gram's stain, AFB microscopy
- 6.5.2. TC, DC, Hb, ESR
- 6.5.3. Blood sugar, Blood urea

6.6. Basic knowledge of Anatomy and Physiology

- 6.6.1. Digestive system – pancreatic amylase, ptyalin
- 6.6.2. Urinary system – kidney, bladder, ureter
- 6.6.3. Circulatory system- Blood, Artery, Veins
- 6.6.4. Nervous System- Brain, Nerves

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, चौथो तह ल्याब असिष्टेन्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

द्वितीय पत्र (Paper II):

सेवा सम्बन्धी कार्य-ज्ञान (Job Based- Knowledge)

पूर्णाङ्क: १००

खण्ड क (Section A)

पूर्णाङ्क: ५०

1. Microbiology

1.1. Bacteriology

- 1.1.1. General knowledge about Bacteriology
- 1.1.2. Morphology of Bacteria (size, shape)
- 1.1.3. Differentiation of bacteria (cocci, bacilli)
- 1.1.4. Sample collection (pus, urine, throat swab, sputum, blood)
- 1.1.5. Principle of Gram's stain, microscopic identification of Gram +ve and Gram -ve bacteria.
- 1.1.6. Staining- Use of different dye and its principle, method of preparation.
- 1.1.7. Mycobacteria- M. tuberculosis/M. leprae, sample collection, staining and recording result.
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- 1.1.9. Safety precaution and proper disposal of infected materials.
- 1.1.10. Culture media-General introduction to different type of culture media.
- 1.1.11. General introduction to sterilization- by dry heat, moist heat, formaldehyde
- 1.1.12. Cultural technique of blood, urine, sputum, throat swab, stool
- 1.1.13. Use of disinfectants-preparation of disinfectant solution.

1.2. Parasitology

- 1.2.1. Introduction to parasitology,
- 1.2.2. Terms used in parasitology,
- 1.2.3. Classification of parasites
- 1.2.4. Helminthic parasites (Ascaris lumbricoides, Ancylostoma duodenale, Necator Americanus, Trichiuris trichiura, Strongyloides stercoralis, Enterobius vermicularis, Taenia solium, Taenia saginata, Hymenolepis nana, life cycle, mode of transmission, laboratory diagnosis, prevention and control measures.
- 1.2.5. Protozoal parasites (Giardia lamblia, Entamoeba histolytica, Entamoeba coli, Balantidium coli, Trichomonas vaginalis, Trichomonas hominis) - life cycle, mode of transmission, laboratory diagnosis, prevention and control measures.
- 1.2.6. Dysentery (amoebic and bacillary dysentery).
- 1.2.7. Difference between Entamoeba coli & Entamoeba histolytica
- 1.2.8. Laboratory procedure:
 - 1.2.8.1. Collection of samples.
 - 1.2.8.2. Preparation of reagents: normal saline solution, Iodine solution, 33% Zinc sulphate solution.
 - 1.2.8.3. Stool examination- routine and concentration method, interpretation of results.
 - 1.2.8.4. Occult blood test.
 - 1.2.8.5. Disposal of waste materials

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, चौथो तह ल्याब असिष्टेन्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

2. Hematology

- 2.1. Composition of blood, plasma, serum and whole blood.
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- 2.4. Use of instruments – Sahli's haemoglobinometer, haemocytometers, diluting pipettes, Neubaur counting chamber, ESR tubes, importance of bulk dilution, preparation of blood diluting fluid.
- 2.5. Preparation of thin and thick blood smears.
- 2.6. Total WBC, RBC and platelet count.
- 2.7. Sources of error in blood count.
- 2.8. Differential WBC count.
- 2.9. ESR estimation (Wintrobe and Westergren method).
- 2.10. Hemoglobin estimation, preparation of standard curve.
- 2.11. Preparation of Drabkin's Solution.
- 2.12. Use of Sahli Haemoglobinometer
- 2.13. Preparation of N/10 HCL.
- 2.14. Performance of –BT, CT,
- 2.15. Staining procedure – Preparation and use of Wright's stain and its principle.
- 2.16. Blood parasites – Malaria, filaria,
- 2.17. Perform blood grouping
- 2.18. Sources of errors in above hematological tests.
- 2.19. Quality control in hematology.

खण्ड ख (Section B)

पूर्णाङ्कः ५०

3. Biochemistry

- 3.1. Basic chemistry- matter, substance, atom, molecules, element and compound.
- 3.2. Solution- Preparation of normal solution
- 3.3. Cleaning of glass-ware
- 3.4. Instrument: Colorimeter, Centrifuge, Balance, Refrigerator
- 3.5. Law of colorimetry-Beer's and Lambert's law
- 3.6. Collection of specimens for biochemical tests
- 3.7. Estimation of Blood glucose preparation of standard curve interpretation of results, source of errors.
- 3.8. Estimation of Blood Urea, interpretation of result, source of errors.
- 3.9. Preparation of reagents for Glucose, Urea,
- 3.10. Estimation of Serum amylase, and calculation of results.
- 3.11. CSF – Glucose, Protein, Cell count, Gram's stain, AFB stain

प्रदेश निजामति सेवा तथा स्थानीय निजामति सेवा अन्तर्गत स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, चौथो तह ल्याब असिष्टेन्ट पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

7. Miscellaneous

7.1. Urinalysis

- 7.1.1. Importance of urinalysis
- 7.1.2. Collection of specimens
- 7.1.3. Preservation of urine for routine & culture purpose.
- 7.1.4. Examination of urinary deposit
- 7.1.5. Urine albumin test by Heat and Acetic Acid method, Sulfo Salicylic Acid method & Strip method.
- 7.1.6. Urinary glucose test by Benedict's & strip methods.
- 7.1.7. Preparation of Benedict's reagents.

7.2. Semen analysis

- 7.2.1. Volume
- 7.2.2. Motility
- 7.2.3. Sperm count

7.3. Instrumentation

- 7.3.1. Microscope- use of microscope, parts of microscope, handling of microscope.
- 7.3.2. Use of incubators, hot air oven, water bath, refrigerator, chemical balance, Colorimeter.
- 7.3.3. Basic knowledge of glass-ware (test tube, flask, measuring cylinder).

7.4. Immunology

- 7.4.1. Perform VDR L and HIV tests.
- 7.4.2. Definition of precipitation, agglutination, flocculation.

7.5. Quality control in following tests

- 7.5.1. Gram's stain, AFB microscopy
- 7.5.2. TC, DC, Hb, ESR
- 7.5.3. Blood sugar, Blood urea

7.6. Basic knowledge of Anatomy and Physiology

- 7.6.1. Digestive system – pancreatic amylase, ptyalin
- 7.6.2. Urinary system – kidney, bladder, ureter
- 7.6.3. Circulatory system- Blood, Artery, Veins
- 7.6.4. Nervous System- Brain, Nerves