

प्रदेश लोक सेवा आयोग

लुम्बिनी प्रदेश

प्रदेश स्वास्थ्य सेवा तथा स्थानीय सरकारी सेवा, मेडिकल ल्याव टेक्नोलोजी समूह, सहायक चौथो तह,
ल्याव असिस्टेण्ट पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा:- यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइने छः

प्रथम चरण :-	लिखित परीक्षा	पूर्णाङ्क :- १००
द्वितीय चरण :-	अन्तर्वार्ता	पूर्णाङ्क :- २०

प्रथम चरण-लिखित परीक्षा योजना (Examination Scheme)

विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या x अङ्कभार	समय
सेवा सम्बन्धी	१००	४०	वस्तुगत बहुवैकल्पिक (Multiple Choice)	५० प्रश्न x २ अङ्क = १००	४५ मिनेट

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	२०	मौखिक

दृष्टव्यः

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
- लिखित परीक्षामा पाठ्यक्रमको एकाइहरूबाट सोधिने प्रश्नसंख्या निम्नानुसार हुनेछ ।

पाठ्यक्रमका एकाइ	A		B	C	D
	1	2			
प्रश्न संख्या	5	10	12	10	13

- 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 ।
- 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 लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति :-

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विषय:-सेवा सम्बन्धी

A. Microbiology

1. Bacteriology

- 1.1 General knowledge about Bacteriology
- 1.2 Morphology of Bacteria (size, shape)
- 1.3 Differentiation of bacteria (cocci, bacilli)
- 1.4 Sample collection (pus, urine, throat swab, sputum, blood)
- 1.5 Principle of Gram's stain, microscopic identification of Gram +ve and Gram -ve bacteria.
- 1.6 Staining- Use of different dye and its principle, method of preparation.
- 1.7 Mycobacteria- M. tuberculosis/M.leprae, sample collection , staining and recording result.
- 1.8 Preparation of sputum smear
- 1.9 Safety precaution and proper disposal of infected materials.
- 1.10 Culture media-General introduction to different type of culture media.
- 1.11 General introduction to sterilization- by dry heat, moist heat, formaldehyde
- 1.12 Cultural technique of blood, urine, sputum, throat swab, stool
- 1.13 Use of disinfectants-preparation of disinfectant solution.

2. Parasitology

- 2.1 Introduction to parasitology,
- 2.2 Terms used in parasitology,
- 2.3 Classification of parasites
- 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.
- 2.5 Protozoal parasites(Giardia lamblia, Entamoeba histolytica, Entamoeba coli, Balatidum coli, Trichomonas vaginalis, Trichomonas hominis) - life cycle, mode of transmission, laboratory diagnosis, prevention and control measures.
- 2.6 Dysentery (amoebic and bacillary dysentery).
- 2.7 Difference between of Entamoeba coli & Entamoeba histolytica
- 2.8 Laboratory procedure :
 - 2.8.1 Collection of sample.
 - 2.8.2 Preparation of reagents: normal saline solution, Iodine solution, 33% Zinc sulphate sol'n.
 - 2.8.3 Stool examination- routine and concentration method, interpretation of results.
 - 2.8.4 Occult blood test.
 - 2.8.5 Disposal of waste materials

B. Hematology

- 1 Composition of blood, plasma, serum and whole blood.
- 2 Collection of blood sample – finger prick, vein puncture, ear lobe prick.
- 3 Anticoagulants, types of anticoagulants, preparation of Anticoagulant vials.
- 4 Use of instruments – Sahli's haemoglobinometer, haemocytometers, diluting pipettes, Neubaur counting chamber, ESR tubes, importance of bulk dilution, preparation of blood diluting fluid.
- 5 Preparation of thin and thick blood smears.
- 6 Total WBC, RBC and platelet count.
- 7 Sources of error in blood count.
- 8 Differential WBC count.
- 9 ESR estimation (Wintrobe and Westergren method).
- 10 Haemoglobin estimation, preparation of standard curve.
- 11 Preparation of Drabkin's Solution.
- 12 Use of Sahli Haemoglobinometer
- 13 Preparation of N/10 HCL.
- 14 Performance of –BT, CT,

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- 15 Staining procedure – Preparation and use of Wright's stain and its principle.
- 16 Blood parasites – Malaria, filaria,
- 17 Perform blood grouping
- 18 Sources of errors in above hematological tests.
- 19 Quality control in hematology.

C. Biochemistry

- 1 Basic chemistry- matter, substance, atom and molecules element, compound.
- 2 Solution- Preparation of normal sol'n,
- 3 Cleaning of glass-wares
- 4 Instrument : Colorimeter, , Centrifuge, Balance, Refrigerator
- 5 Law of colorimetry-Beer's and Lambert's law
- 6 Collection of specimen for biochemical tests
- 7 Estimation of B.glucose preparation of std. curve interpretation of results, source of errors.
- 8 Estimation of Blood Urea ,interpretation of result, source of errors.
- 9 Preparation of reagents for Glucose, Urea,
- 10 Estimation of S.amylase, and calculation of results.
- 11 CSF – Glucose, Protein, Cell count, Gram's stain, AFB stain

D. Miscellaneous

1. Urinalysis

- 1.1 Importance of urine analysis
- 1.2 Collection of specimen
- 1.3 Preservation of urine for routine & culture purpose.
- 1.4 Examination of urinary deposit
- 1.5 Urine albumin test by heat and acetic acid, SSA method & strip.
- 1.6 Urinary glucose test by Benedict's & strip methods.
- 1.7 Preparation of Benedict's reagents.

2. Semen analysis

- 2.1 Volume
- 2.2 Motility
- 2.3 Sperm count

3. Instrumentation

- 3.1 Microscope- use of microscope, parts of microscope, handling of microscope.
- 3.2 Use of incubators, hot air oven, water bath, refrigerator, chemical balance, Colori meter.
- 3.3 Basic knowledge of glass-wares (test tube, flask, measuring cylinder).

4. Immunology

- 4.1 Perform VDR L and HIV tests.
- 4.2 Definition of precipitation, agglutination, flocculation.

5. Quality control in following tests

- 5.1 Gram's stain, AFB microscopy
- 5.2 TC, DC, Hb, ESR
- 5.3 Blood sugar, Blood urea

6. Basic knowledge of Anatomy and Physiology

- 6.1 Digestive system – pancreatic amylase, ptylin
- 6.2 Urinary system – kidney, bladder, ureter
