



सोलुदुधकुण्ड नगरपालिका
नगर कार्यपालिकाको कार्यालय
सल्लेरी, सोलुखुम्बु
परीक्षा पाठ्यक्रम - २०८०

सेवा: नेपाल स्वास्थ्य

पद: ल्याब असिस्टेन्ट

तह: चौथो

परीक्षा योजना (Examination Scheme)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या	समय
प्रथम चरण	सेवा सम्बन्धी ज्ञान	८०	३२	वस्तुगत (बहु बैकल्पिक)	४०*२=८० अंक	४० मिनेट
दोश्रो चरण	मौखिक अन्तरवार्ता	२०	-	अन्तरवार्ता समिति		

द्रष्टव्य:

१. प्रश्नपत्र नेपाली, अंग्रेजी अथवा नेपाली र अंग्रेजी दुबै भाषामा हुनेछ।
२. बहुवैकल्पिक वस्तुगत (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा अङ्क कट्टा गरिने छैन।
३. परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन।
४. वस्तुगत प्रश्नको उत्तर कुञ्जिका उपलब्ध गराइनेछ।
५. प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई द्वितीय चरणको मौखिक अन्तरवार्तामा सामेल गराइनेछ।
६. लिखित परीक्षामा यथासम्भव दिइएको पाठ्यक्रमबाट प्रश्नहरू सोधिनेछ।
७. पाठ्यक्रम लागू हुने मिति २०८०/०९/२४ गते जारी सेवा करारको सूचना सम्बन्धमा।

कोपिला राई
प्रमुख प्रशासकीय अधिकृत



स्वास्थ्य सेवा, ल्याब असिस्टेन्ट पद, चौथो तहको प्रथम चरण लिखित परीक्षाको सेवा सम्बन्धी विषयवस्तुहरु

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
- 1.1.8 Preparation of sputum smear
- 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
- 1.1.12 Cultural technique of blood, urine, sputum, throat swab
- 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 Americans, Trichiuris trichiura, Strongyloides stercoralis, 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, Balatidum 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 of Entamoeba coli & Entamoeba histolytica
- 1.2.8 Laboratory procedure :
 - 1.2.8.1 Collection of sample

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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

2. Haematology

2.1 Composition of blood, plasma, serum and whole blood

2.2 Collection of blood sample – finger prick, vein puncture, ear lobe prick

2.3 Anticoagulants, types of anticoagulants, preparation of Anticoagulant vials

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 Haemoglobin 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 haematological tests

2.19 Quality control in haematology

3. Biochemistry

3.1 Basic chemistry- matter, substance, atom and molecules element, compound

3.2 Solution- Preparation of normal solution

3.3 Cleaning of glass-wares

3.4 Instruments : Colorimeter, Centrifuge, Balance, Refrigerator

3.5 Law of colorimetry - Beer's and Lambert's law

3.6 Collection of specimen for biochemical tests

3.7 Estimation of B. glucose preparation of std. 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 S. amylase, and calculation of results

3.11 CSF – Glucose, Protein, Cell count, Gram's stain, AFB stain

4. Miscellaneous

4.1 Urine lysis

4.1.1 Importance of urine analysis

4.1.2 Collection of specimen

4.1.3 Preservation of urine for routine & culture purpose

4.1.4 Examination of urinary deposit

4.1.5 Urine albumin test by heat and acetic acid, SSA method & strip

4.1.6 Urinary glucose test by Benedict's & strip methods.

4.1.7 Preparation of Benedict's reagents

4.1.8 Semen analysis

4.1.9 Volume, Motility and Sperm count

4.2 Instrumentation

4.2.1 Microscope - parts of microscope, use and handling of microscope

4.2.2 Use of incubators, hot air oven, water bath, refrigerator, chemical balance, Colori meter

4.3.3 Basic knowledge of glass-wares (test tube, flask, measuring cylinder)

4.2.3 Immunology

4.2.4 Perform VDR L and HIV tests

4.2.5 Definition of precipitation, agglutination, flocculation

4.2.6 Quality control in following tests

4.2.7 Gram's stain, AFB microscopy

4.2.8 TC, DC, Hb, ESR

4.2.9 Blood sugar, Blood urea

4.3 Basic knowledge of Anatomy and Physiology

4.3.1 Digestive system – pancreatic amylase, ptylin

4..2 Urinary system – kidney, bladder, ureter