

लम्कीचुहा नगरपालिका  
नगर कार्यपालिकाको कार्यालय

भल्का, कैलाली

सुदूरपश्चिम प्रदेश, नेपाल

स्वास्थ्य सेवा, ल्याव असिस्टेन्ट (सहायक चौथो) पदको लिखित परिक्षाको पाठ्यक्रम

परिक्षा योजना (Examination Scheme)

चरण	विषय	पूर्णाङ्क	परिक्षाको प्रकृति	प्रश्न संख्या	समय
प्रथम चरण	विषय सम्बन्धी	१००	बहुवैकल्पिक प्रश्न	५०*२=१००	४५ मिनेट
द्वितीय चरण	अन्तरवार्ता	२५			

द्रष्टव्यः

- प्रथम चरणको प्रश्नपत्रको भाषा नेपाली, अङ्ग्रेजी वा नेपाली र अङ्ग्रेजी दुबै हुनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अंक कट्टा गरिनेछैन ।
- बस्तुगत बहुवैकल्पिक (Multiple Choice) हुने परीणामा परीक्षार्थीले उत्तर लेख्दा अङ्ग्रेजी ठूलो अक्षरहरू (Capital Letters) मा लेख्नु पर्नेछ। सानो अक्षरहरू (Small Letters) लेखेको वा अन्य केरमेट गरेको भए सो उत्तरलाई गलत मानिनेछ ।
- बहुवैकल्पिक प्रश्न हुने परीक्षामा कुनै प्रकारको क्यालकुलेटर प्रयोग गर्न पाइने छैन ।
- परीक्षामा सोधिने प्रश्नहरू यथासम्भव सम्बन्धित पाठ्यक्रममा विभाजन गरेको अङ्कको आधारमा सोधिनेछ ।
- पाठ्यक्रममा परेका कानुन, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडी संशोधन भई हटाईएको वा थप गरी संशोधन भइ कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षामा उत्तीर्ण भएका उम्मेदवारलाई मात्र द्वितीय चरणको अन्तरवार्तामा सम्मिलित गराइनेछ ।
- प्रथम चरणको लिखित परीक्षा र अन्तरवार्ता अङ्कको योग समेतका आधारमा योग्यताक्रमको सूचीमा समावेश गरी अन्तिम परीक्षा फल प्रकाशन गरिनेछ ।

## **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,

1.12 Cultural technique of blood, urine, sputum, throat swab.

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*, *Balantidium 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. Haematology**

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 Anticoagulantvials.

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,

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 haematological tests.

19 Quality control in haematology.

### **C. Biochemistry**

1 Basic chemistry- matter, substance, atom and molecules element, compound.

2 Solution- Preparation of normal sol'n,

3 Cleaning of glass-ware

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, Colorimeter.

3.3 Basic knowledge of glass-ware (test tube, flask, measuring cylinder).

## **4. Immunology**

4.1 Perform VDRL 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