काठमाडौं महानगरपालिका

स्थानीय स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी, पाचौं तह, ल्याब टेक्निसियन पद

प्रतियोगितात्मक परीक्षाको पाठयक्रम

यस पाठयक्रम योजनालाई दुई चरणमा विभाजन गरिएको छः

| | | |
|---|---|---|
| प्रथम चरणः- | लिखित परीक्षा ( Written Examination) | पूर्णाङ्कः १०० |
| द्वितीय चरणः- | अन्तर्वार्ता (Interview) | पूर्णाङ्कः ३० |

## परीक्षा योजना (Examination Scheme)

**प्रथम चरणः लिखित परीक्षा (Written Examination)** पूर्णाङ्कः १००

| पत्र | विषय | पूर्णाङ्क | उतिर्णाङ्क | परीक्षा प्रणाली | | प्रश्न संख्या* अङ्क | समय |
|---|---|---|---|---|---|---|---|
| प्रथम | सेवा सम्बन्धी कार्य ज्ञान (Job related functional knowledge) | १०० | ४० | वस्तुगत (Objective) | बहुवैकल्पिक प्रश्न (MCQs) | ५० प्रश्न * २ अङ्क | ४५ मिनेट |

**द्वितीय चरणः अन्तर्वार्ता (Interview)** पूर्णाङ्कः ३०

| विषय | पूर्णाङ्क | उतिर्णाङ्क | परीक्षा | समय |
|---|---|---|---|---|
| अन्तर्वार्ता (Interview) | ३० | | अन्तर्वार्ता (Interview) | |

**प्रथम चरणः लिखित परीक्षा** सेवा सम्बन्धी कार्य ज्ञान (Job related functional knowledge) को पाठयक्रमको एकाइबाट परीक्षामा यथासम्भव देहाय बमोजिम प्रश्नहरु सोधिने छ।

| पाठयक्रम एकाइ | १ | २ | ३ | ४ | ५ |
|---|---|---|---|---|---|
| प्रश्न संख्या | १२ | १४ | १२ | ६ | ६ |

**भाग (Part I):-**

**सेवा सम्बन्धी कार्य-ज्ञान (Job related functional knowledge)**

(५० प्रश्न*२ अङ्क = १०० अङ्क)

**1. Hematology**

1.1 Cleaning of glassware and safety precaution in the laboratory
1.2 Collection and preservation of different samples for the laboratory
1.3 Preparation of chemicals and different stains for the Hematological tests
1.4 Quality control in the laboratory
1.5 Formation and development of Erythrocytes, Leucocytes, thrombocytes
1.6 Principle and clinical procedure for:
- 1.6.1 Hemoglobin estimation and it's standard curve calibration
- 1.6.2 Total count of W.B.C., R.B.C., Platelets and reticulocytes
- 1.6.3 E.S.R., B.T., C.T., and RBC indices
- 1.6.4 Coomb's tests
- 1.6.5 Blood banking & Transfusion
- 1.6.6 Coagulation profile (mechanism, disorder & investigations)

obiology
acteriology
2.1.1 Classification of medically important bacteria
2.1.2 Characteristics of Microorganism: Prokaryotes, Eukaryotes, Viruses
2.1.3 Different methods of sterilization and disinfections
2.1.4 Preparation of different media and ingredients uses and interpretation
2.1.5 Preparation of chemicals and stains
2.1.6 Cultural procedure of different samples aerobically
2.1.7 Identification of bacteria and confirmative tests serologically and bio-chemically
2.1.8 Different staining methods of bacteria and their principles
2.1.9 T.B. Bacteriology and skin scraping for A.F.B
2.1.10 Quality control in Bacteriology Laboratory
2.1.11 The universal precaution in microbiology laboratory and safe west disposal of infected materials

2.2 Virology
2.2.1 General properties of virus comparing with bacteria, terminology used in virology and basic laboratory procedure used in the diagnosis of viral disease

2.3 Parasitology
2.3.1 Classification of medically important:
2.3.1.1 Protozoal parasite
2.3.1.2 Helminthic parasites
2.3.1.3 blood parasites
2.3.1.4 Semen analysis
2.3.2 Methods of identification of different parasites from stool samples by:
2.3.2.1 Wet preparation
2.3.2.2 Concentration methods
2.3.2.3 Cultural methods
2.3.3 Method of identification of blood parasites
2.3.4 Routine Examination and special test in Urine

2.4 Mycology
2.4.1 Terminologies used in mycology sample collection for fungal infection (skin scarping, nails and hair) and method of wet preparation

2.5 Immunology
2.5.1 Principle and procedure for the estimation of:
2.5.1.1 V.D.R.L., (RPR); A.S.O.; C.R.P.; Rheumatoid factor
2.5.1.2 ELISA Test
2.5.1.3 Blood Grouping

3. **Biochemistry**

3.1 Define of mol. wt and eq. wt
3.2 Preparation of normal and molar solution
3.3 Colorimeter/spectrophotometer
3.4 Principle and procedure of different methods for the estimation of biochemical tests
3.4.1 Sugar, Urea, Creatinine, Uric Acid, LFT Amylase
3.4.2 Cavity fluids examination
3.4.3 C.S.F examination
3.4.4 24 hours Urine Protein
3.5 Simple theory of lights waves, function of filters Beers and Lamberts law, absorbance and percent transmission
3.6 The lab hazards and precautions to be taken while working in clinical Biochemistry lab

...e structure and functions of alimentary canal, digestive system, circulatory system, urinary system ...espiratory system

5. **Histology/Cytology**

5.1 Different types of fixatives and their uses

5.2 Methods of decalcification

5.3 Methods of processing of tissues to prepare paraffin block tissue

5.4 Methods of cutting section from the paraffin block tissue and staining procedure