

काठमाडौं महानगरपालिका
नगरकार्यपालिकाको कार्यालय

प्रदेश नं.३, नेपाल

प्राविधिक सेवा, मेडिकल ल्याव टेक्नोलोजी समूह, पाँचौ तहको करार सेवामा पदपूर्तिको लागि लिखित परीक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार दुई चरणमा परीक्षा लिइने छ :

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 बहुउत्तर (Multiple Choice)	५० X २ = १००	४५ मिनेट

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली
व्यक्तिगत अन्तर्वार्ता	२०	मौखिक

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

पाठ्यक्रमका एकाइ	1	2.1	2.2	2.3	2.4	2.5	3	4	5
प्रश्न संख्या	12	4	2	2	2	3	12	8	5

- वस्तुगत बहुउत्तर (Multiple Choice) प्रश्नहरूको उत्तर सही दिएमा प्रत्येक सही उत्तर बापत २ (दुई) अङ्क प्रदान गरिनेछ भने गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अर्थात् ०.४ अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- यस पाठ्यक्रममा जेसुकै लेखिएको भएता पनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मिति भन्दा ३ (तीन) महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा रहेको सम्झनु पर्दछ ।
- लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र अन्तर्वार्तामा सम्मिलित गराइनेछ ।

1. Haematology

- 1.1 Cleaning of glasswares 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)
 - 1.6.7 LE cell preparation
 - 1.6.8 Tissue parasite
 - 1.6.9 Absolutes cell count

2. MICROBIOLOGY

- 2.1 Bacteriology
 - 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)
 - 2.5.1.2 A.S.O.
 - 2.5.1.3 C.R.P.
 - 2.5.1.4 Rheumatoid factor
 - 2.5.1.5 ELISA Test
 - 2.5.1.6 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
- 4. Anatomy and physiology**
 - 4.1 Important anatomical terminologies
 - 4.2 The composition and function of blood
 - 4.3 The structure and functions of alimentary canal, digestive system, circulatory system, urinary system & respiratory 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

वस्तुगत बहुउत्तर नमूना प्रश्नहरू (Sample Questions)

1. The functional unit of Kidneys is ?
A) Bowman's capsule
B) Nephrones
C) Loop of Henele
D) Proxymal Tubles
Correct Answer:- (B)
2. Haematoxylin stains
A) Cytoplasm
B) Cytoplasmic organells
C) Nucleoli
D) Nucleus
Correct Answer:- (D)
3. Haemoglobin concentration at birth is?
A) >20 grm%
B) 18 – 20 grm%
C) 16 – 18 grm%
D) 14 – 16 grm%
Correct Answer:- (A)
4. Brilliant cresyl blue Stain is used to stain ?
A) Reticulocytes
B) Hienz Bodies
C) HbH
D) All of the above
Correct Answer:- (D)
5. Motile bacteria possess which of the following
A) Flagella
B) Cilia
C) Cell wall
D) Inclusions
Correct Answer:- (A)
6. Normal value of post prandial (2hrs) sugar is
A) 70 – 110 mg/dl
B) 70 – 120 mg/dl
C) 70 – 130 mg/dl
D) 70 – 140 mg/dl
Correct Answer:- (A)
7. Which of the following parasites may be transmitted by cat ?
A) B. coli
B) T. gondii
C) E. granulosus
D) Toxocara canis
Correct Answer:- (B)