

शहीद धर्मभक्त राष्ट्रिय प्रत्यारोपण केन्द्र
नेपाल स्वास्थ्य सेवा, मेडिकल ल्याब टेक्नोलोजी समूह, सहायक पाँचौ तहको प्रतियोगितात्मक परीक्षाको लागि
पाठ्यक्रम
एवं परीक्षा योजना

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण :- लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- १००

द्वितीय चरण :- अन्तर्वार्ता (Interview)

पूर्णाङ्क :- २०

प्रथम चरण (First Phase) : लिखित परीक्षा योजना (Written Examination Scheme)

पत्र	विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या X अङ्क	समय
प्रथम	Technical Subject	१००	४०	वस्तुगत	बहुवैकल्पिक प्रश्न	५० प्रश्न x २ अङ्क	४५ मिनेट

द्वितीय चरण (Second Phase)

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	२०	मौखिक

द्रष्टव्य :

- यो परीक्षा योजनालाई प्रथम चरण (लिखित परीक्षा) र द्वितीय चरण (अन्तर्वार्ता) गरी दुई चरणमा विभाजन गरिएको छ ।
- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- परीक्षामा सोधिने प्रश्नसंख्या, अङ्क र अङ्कभार यथासम्भव सम्बन्धित पत्र/विषयमा तोकिए अनुसार हुनेछ ।
- 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 ।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति :-

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Paper I: Technical subject

1. Haematology

- 1.1 Cleaning of glass wares 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 Tissue parasite

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 waste 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
 - 2.3.2 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

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- 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
6. **Human Organ donation and transplantation**
 - 6.1 Basic concept of solid organ donation and transplantation
 - 6.2 Screening tests for Transplantation
 - 6.3 Transplant related medications and their monitoring in blood
7. **Human Organ Transplant Act and Regulations**
 - 7.1 Human Organ Transplantation (Regulation and Prohibition) Act- 2055
 - 7.2 Human Organ Transplantation (Regulation and Prohibition) Act- 2072
 - 7.3 Human Organ Transplantation Regulations- 2073
8. **General Knowledge on Shahid Dharmabhakta National transplant Center**