

प्रदेश लोक सेवा आयोग

सुदूरपश्चिम प्रदेश

प्रदेश निजामती सेवा र स्थानीय सरकारी सेवा अन्तरगत स्वास्थ्य सेवा, प्याथोलोजी समूह, जनरल प्याथोलोजी उपसमूह नवीं तह वा सो सरह पदको खुला, अन्तर तह र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

यस पाठ्यक्रम योजनालाई निम्न अनुसार दुई चरणमा विभाजन गरिएको छ :

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

पूर्णांक : २००

द्वितीय चरण (Second Phase) : अन्तरवार्ता (Interview)

पूर्णांक : २५

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा (Written Examination)

पूर्णांक : २००

पत्र	विषय	खण्ड	पूर्णांक	उतीर्णांक	परीक्षा प्रणाली	प्रश्न संख्या × अंक	समय	
प्रथम	General Subjects	(क) Management	50	40	Subjective	Short Answer Long Answer	6 x 5 2 x 10	3.00 hrs.
		(ख) General Health Issues	50		Subjective	Short Answer Long Answer	4 x 5 3 x 10	
द्वितीय	Technical Subject		100	40	Subjective	Critical Analysis	4 x 15	3.00 hrs.
		Subjective			Problem Solving	2 x 20		

द्वितीय चरण : अन्तरवार्ता (Interview)

पूर्णांक : २५

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुबै हुन सक्नेछ ।
- स्वास्थ्य सेवा अन्तरगतका सबै समूह/सबै उपसमूहहरूको लागि प्रथम पत्र को पाठ्यक्रमको विषयवस्तु एउटै हुनेछ । तर द्वितीय पत्र Technical Subject को पाठ्यक्रम समूह/उपसमूह अनुरूप फरक फरक हुनेछ ।
- प्रथम पत्र को लिखित परीक्षा समूह/उपसमूहहरूका लागि संयुक्त रूपमा एउटै प्रश्नपत्रबाट एकैदिन वा छुट्टाछुट्टै प्रश्नपत्रबाट छुट्टाछुट्टै दिन पनि हुन सक्नेछ । तर द्वितीय पत्र को परीक्षा समूह/उपसमूह अनुसार अलग अलग दिन छुट्टाछुट्टै प्रश्नपत्रबाट हुनेछ ।
- प्रथम पत्रको खण्ड (क) र खण्ड (ख) को लागि छुट्टाछुट्टै उत्तरपुस्तिका हुनेछन । (खण्ड - क को लागि एउटा र खण्ड - ख को लागि एउटा) भने द्वितीय पत्रको लागि प्रत्येक प्रश्नका उत्तरपुस्तिकाहरू छुट्टाछुट्टै हुनेछन् ।
- यस पाठ्यक्रममा जे सुकै लेखिएको भएता पनि पाठ्यक्रममा परेका ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि संसोधन भएका वा संशोधित भई कायम रहेका वा थप गरी संशोधित भई कायम रहेका लाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तरवार्तामा सम्मिलित गराईने छ ।
- पाठ्यक्रम लागु मिति : २०८१।१०।१० गते देखि ।

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प्रथम पत्र : General Subject

(Management and General Health issues)

खण्ड – (क) : 50 Marks

(Management)

1. Management : concept, principles, functions, scope, role, level and skills of managers
2. Hospital management
3. Participative management : concept, advantages and disadvantages, techniques of participation
4. Time management : concept, advantages, and disadvantages
5. Conflict management : concept, approaches to conflict, levels of conflict, causes of conflict and strategies for conflict management, Negotiation skills
6. Stress management : concept, causes and sources of stress, techniques of stress management
7. Appreciative inquiry : concept, basic principles and management
8. Human resource management : concept, functions and different aspects, HRM strategy
9. Planning : concept, principles, nature, types, instrument and steps, logical framework
10. Financial management : concept, approaches, budget formulation and implementation, auditing and topics related to fiscal management, procurement, supply chain management, e-LMIS
11. Leadership : concept, functions, leadership styles, leadership and management effectiveness
12. Coordination : concept, need, types, techniques, and approaches of effective coordination
13. Communication : concept, communication process and barrier to effective Communication, techniques for improving communication
14. Health manpower recruitment and development
15. Organizational structure of Federal, provincial health related ministry
16. Governance : Good governance system in Health Sector
17. Health system, WHO Six Building blocks
18. Sudurpashchim Province Civil Service Act and Regulation
19. Procurement Act, 2063 & Sudurpashchim Pradesh Procurement Regulation, 2078
20. Sudurpashchim Pradesh Good Governance Act, 2075

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खण्ड – (ख) : 50 Marks

(General Health Issues)

1. The Constitution of Nepal (health and welfare issues)
2. National and Provincial Health Policy and Public Health Act
3. Health Sector in current 5 year Sudurpashchim provincial plan
4. Health Services Act 2053, Health Service Regulation, 2055
5. International Health Agencies: multilateral, bilateral, NGOs/INGOs working in Sudurpashchim province
6. Health related Professional Council and related regulations
7. Medical ethics in general and its application
8. Indigenous and traditional faith healing and health mal-practices in context of Sudurpashchim Province
9. Supervision, types and its usage in health sector
10. Monitoring and evaluation system in health sector
11. Health Management Information System
12. Social Health insurance, health care financing and concept of co-payment
13. Importance of water, sanitation and hygiene in public health
14. Disaster and emergency management in health sector, HOPE
15. Effect of environment in public health: air pollution, water pollution, soil and noise pollution
16. FCHVs involvement in health service delivery
17. Community involvement in health service delivery
18. Counseling: - concept, type, importance and its application in health service delivery
19. Cross cutting issues: - GESI, Climate change, health in all policy

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द्वितीय पत्र : Technical Subject

1. Histopathology

- 1.1. Identify and describe the gross anatomic and microscopic alteration in the surgically removed specimens and autopsy specimens. Interpret and diagnose when clinical and operative data are provided.
- 1.2. Explain the principles of laboratory techniques and perform the procedures in histopathology laboratory

2. Cytopathology

- 2.1. Interpret and diagnose the morphological changes in cytological specimens when clinical and operative data are provided.
- 2.2. Explain the principles of laboratory techniques and perform the common procedures in cytopathology laboratory.
- 2.3. Perform fine needles aspiration techniques.

3. Hematopathology

- 3.1. Plan a strategy for investigating haematological disorders and perform and interpret them.
- 3.2. Perform haematological procedures and interpret the results.
- 3.3. Interpret and diagnose the morphological changes in the blood and bone marrow specimens.
- 3.4. Perform a bone marrow aspiration.

4. Clinical Microbiology

- 4.1. Routine and special tests of urine, stool and body fluids
- 4.2. Staining technique, Gram's stain, AFB stain.
- 4.3. Aerobic and anaerobic culture and sensitivity
- 4.4. Common serological tests.

5. Clinical Chemistry

- 5.1. Interpretation and procedure of routine clinical chemistry tests.
- 5.2. Equipments: Spectrophotometer, Colorimeter, Flame photometer, Blood gas analyzer, Auto analyzer.

6. Autopsy Pathology

- 6.1. Dissection of body partial/whole
- 6.2. Preparation of provisional anatomical diagnosis and final anatomical diagnosis

7. Blood Bank

- 7.1. Blood preservation
- 7.2. Haematophoresis
- 7.3. Blood grouping and cross matching

8. Immunology

- 8.1. Basic immunology
- 8.2. Immunological techniques used for diagnostic purpose and their principles.

9. Medical Statistics and Information Technology

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1. Histopathology

- 1.1. Describe the gross anatomy and histology of specimens and tissues of gastrointestinal (GIT), cardiovascular (CVS) and respiratory (RS) systems.
- 1.2. Describe the normal physiology of above systems.
- 1.3. Identify and describe the gross anatomical alterations in the surgically removed specimens.
- 1.4. Correlate the gross pathological diagnosis of the lesions of gastrointestinal (GIT), cardiovascular (CVS) and respiratory (RS) system with the given clinical information.
- 1.5. Explain different types and functions of fixatives in histopathology laboratory.
- 1.6. Explain different types of chemicals and equipment used in tissue processing and perform the procedure.
- 1.7. Explain the steps and principles of H and E staining and mounting and perform them.
- 1.8. Interpret the microscopic findings of various types of lesions of gastrointestinal (GIT), cardiovascular (CVS) and respiratory (RS) system.
- 1.9. Recall the biochemical changes in a tissue or organ in above mentioned conditions.
- 1.10. Diagnose the above mentioned lesions and differentiate them from other similar lesions in view of the clinical findings provided.
- 1.11. Describe the gross anatomy and histology of specimens and tissues of renal electrolytes and reproductive systems.
- 1.12. Describe the normal physiology of renal electrolytes and reproductive systems.
- 1.13. Describe metabolism of carbohydrate, fat protein, nucleic acids, vitamins, copper and minerals.
- 1.14. Identify and describe the gross anatomical alterations in the surgically removed specimen of renal electrolytes respiratory systems and metabolic disorders.
- 1.15. Correlate the gross pathological diagnosis of the lesions of renal electrolytes and reproductive systems with clinical data.
- 1.16. Interpret the microscopic findings of various lesions of renal electrolyte reproductive system and metabolic disorders.
- 1.17. Diagnose and differentiate with various other lesions of above mentioned system.
- 1.18. Describe the gross anatomy and histology of specimen and tissues from musculoskeletal system, neuro sensory systems, eye, ENT and skin.
- 1.19. Describe the normal physiology of the above mentioned systems.
- 1.20. Describe the gross anatomical alterations in the surgically removed specimen of above mentioned systems.
- 1.21. Correlate the gross findings with the microscopic features and clinical presentations.
- 1.22. Explain the use of museum and importance of preservation of specimens.
- 1.23. Frozen Section
 - 1.23.1. Describe the principle and function of cryostat.
 - 1.23.2. Perform frozen section of intraoperative specimens and diagnose.

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2. Cytopathology

- 2.1. Describe the normal cell morphology in vaginal, cervical and endometrial specimens and sputum specimen.
- 2.2. Prepare the above mentioned smears, fix and stain with Pap staining and mount them.
- 2.3. Describe different types of fixatives used in cytopathological laboratory and explain their functions.
- 2.4. Perform fine needle aspiration biopsy procedure, prepare wet and dry smears fix and stain the slides with Pap stain and Giemsa stain.
- 2.5. Explain the principle of Pap stain and Giemsa stain.
- 2.6. Interpret the cellular morphological changes in sputum, vaginal, cervical and endometrial specimen and neoplastic conditions.
- 2.7. Correlate with the clinical findings and diagnose.
- 2.8. Describe the different methods of preparing smears from body fluids including urine and CSF.
- 2.9. Describe the principles of cytocentrifuge and Millipore filtration.
- 2.10. Describe the normal cell morphology in brushing, washing and body fluids smears.
- 2.11. Interpret the cellular morphological changes in brushing, washing and body fluid smears in different inflammatory, non-inflammatory, non-neoplastic and neoplastic conditions.
- 2.12. Correlate the findings with the clinical findings and diagnose them.
- 2.13. Explain sex chromatin. Describe the methods of obtaining and preparation of smears for the examination of sex chromatin.
- 2.14. Interpret the findings.
- 2.15. Describe the congenital anomalies in relation to sex chromosome.
- 2.16. Interpret FNAC smears and diagnose the lesions.

3. Haematopathology

- 3.1. Explain the normal hemopoiesis.
- 3.2. Describe the erythropoiesis.
- 3.3. Describe the structure, function, synthesis and metabolism of haemoglobin.
- 3.4. Classify the different types of Anaemias.
- 3.5. Explain the aetiopathogenesis and morphological findings in the peripheral and bone marrow smears in different types of anaemia and correlate with clinical data and diagnose correctly.
- 3.6. Perform routine as well as the following haematological tests and explain their principle:
 - 3.6.1. Reticulocyte count
 - 3.6.2. Osmotic fragility test
 - 3.6.3. Foetal haemoglobin
 - 3.6.4. LE cell phenomenon
 - 3.6.5. Hb electrophoresis
 - 3.6.6. Serum Iron, Folic acid, Vit B12
 - 3.6.7. Total Iron binding capacity
 - 3.6.8. Serum ferritin
- 3.7. Perform a fine needle bone marrow aspiration and stain with Wright's stain.

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- 3.8. Interpret and diagnose the morphological changes in the blood and bone marrow specimen.
- 3.9. Perform the common haematological procedures and interpret the results.
- 3.10. Perform cytochemical test and interpret.
- 3.11. Classify Leukaemia
- 3.12. Identify different types and their morphological features
- 3.13. Explain principles and interpretation of
 - 3.13.1. Bleeding time
 - 3.13.2. Clotting time
 - 3.13.3. Prothrombin time
 - 3.13.4. Activated partial thromboplastine time
 - 3.13.5. Platelet function test
 - 3.13.6. Factor VII and IX Assay
 - 3.13.7. Bence Jones protein
- 3.14. Plan a strategy of investigations for common haematological diseases.

4. Clinical Microbiology

- 4.1. Perform the routine examination of urine and faeces and interpret the findings correctly.
- 4.2. Perform complete examination of CSF
- 4.3. Perform examination of peripheral blood for blood parasites.
- 4.4. Semen analysis
- 4.5. Identify the common aerobic and anaerobic bacteria in a culture plate.
- 4.6. Perform the Gram's stain and identify the common bacteria.
- 4.7. Perform sensitivity reactions of common bacteria.
- 4.8. Explain the principle of Gram's stain and ZN stain.
- 4.9. Explain the importance of collection of specimens of culture.
- 4.10. Explain principle of HbSAg, HIV tests.

5. Clinical Chemistry

- 5.1. Perform and interpret correctly the routine clinical chemistry tests.
- 5.2. Explain the working principles of spectrophotometer, colorimeter, flame photometer, blood gas analyzer, electrophoresis and automation in laboratory medicine.

6. Autopsy Pathology

- 6.1. Perform a complete/partial autopsy.
- 6.2. Identify the gross and microscopic features found in autopsy body and tissue sections respectively and correlate it with clinical history and diagnosis.
- 6.3. Write the provisional and final anatomical diagnosis reports correctly.

7. Blood Bank

- 7.1. Perform blood grouping and Rh typing tests and cross matching.
- 7.2. Perform Coombs test
- 7.3. Explain the principles and interpretations of above tests

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8. Immunology

- 8.1. Observe and interpret simple immunological tests e.g.:
 - 8.1.1. Agar Gel precipitation
 - 8.1.2. Haemagglutination
 - 8.1.3. Immunoelectrophoresis
 - 8.1.4. Identification of T and B cells in peripheral blood
 - 8.1.5. Immuno Fluorescence technique
 - 8.1.6. Counter current electrophoresis for demonstration of antigen
 - 8.1.7. ELISA techniques.
 - 8.1.8. Explain the principle lying behind these tests.
 - 8.1.9. Explain the principle of fluorescent microscopy.

9. Medical Statistics and Information Technology

- 9.1. Explain the importance of statistical methods in assessing data from patient material and experimental studies, correlation coefficient, expected versus observed and their interpretations.
- 9.2. Calculate mean, standard deviation and standard error from given experimental data.
- 9.3. Familiarity with the use of the computer and other telecommunication devices like the fax for the storage, retrieval and sending of information.
- 9.4. Search for information in the Internet by electronic mail.

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