

प्रदेश लोक सेवा आयोग

सुदूरपश्चिम प्रदेश

प्रदेश निजामती सेवा र स्थानीय सरकारी सेवा अन्तरगत स्वास्थ्य सेवा, रेडियोलोजी समूह, रेडियोडाइग्नोसिस उपसमूह, नवौं 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।०९।१४ 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 Basic Science

A. Anatomy

1. Respiratory system
2. Coardiovascular system
3. Gastrointestinal system
4. Hepatobiliitary System
5. Genito urinary system
6. Skeletal System
7. Cross sectional anatomy
8. Central Nervous system

B. Radiation Physics

1. Electromagnetic radiation & its properties
2. Radiation measurement and units
3. Production and properties of X-ray
4. Interaction of Radiation with matter
5. Properties of X-ray film, film processing
6. 6. Intensifying and fluorescent screens.
7. X-ray absorption on the radiographic image.
8. Gird & filter.
9. Principles of Fluroscopy and IIT.
10. Principle of Diagnosttic ultrasound
11. Principle of CT
12. Principle of MRI
13. Principle of Nuclear Medicine and Imaging
14. Radiation Hazards and its effects

2 Radiology

A. Cardiovascular

1. Normal heart and pericardium
2. Pulmonary circulation
3. Acquired heart diseases
4. Congenital heart diseases

B. Respiratory

1. Normal Chest
2. Tumors of the lung
3. Inflammatory diseases of the lung
4. Remaining diseases of lung, pleura and soft tissue and bony thoracic cage of chest
5. Chest Trauma

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**C. Gastrointestinal tract and abdomen**

1. Diseases of Pharynx, esophagus, stomach and duodenum
2. Diseases of small bowel and large bowel Acute abdomen
3. Diseases of biliary tract
4. Diseases of Liver, spleen & pancreas

**D. Urogenital Tracts**

1. Congenital lesions
2. Cystic diseases of the kidney
3. Tumours of the kidney and ureter
4. Renal calculi and Nephrocalcinosis
5. Renal Vascular diseases
6. Diseases of Bladder and prostate
7. Gynaecological diseases and obstetrical study

**E. Diseases related to ENT, Eye, Teeth and soft tissues**

**F. Central Nervous System**

1. Normal and abnormal skull
2. Diseases of brain and spine
3. Congenital diseases
4. Brain and spinal tumor

**G. Bone & Joints**

1. Congenital skeletal anomalies
2. Diseases of bone and joints
3. Tumors and tumors like conditions of bone
4. Skeletal disorders of metabolic and endocrine diseases
5. Skeletal trauma

**H. Endocrine and metabolic diseases**

1. Ultrasound imaging of the whole body
2. CT Imaging of the whole body
3. MRI Imaging of the whole body
4. Radiological Procedures

**4.1 Urinary tract**

- a) IVI
- b) MCU
- c) RGP and RGU
- d) Nephrotomography

**4.2 Biliary tract and pancreas**

- a) OCG
- b) T-toube cholangiography
- c) ERCP, PTC and PTBD

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### 4.3 GIT

- a) Barium swallow, barium meal, barium follow through, small bowel enema, barium enema, sinogram, loopograme fistulogram.

### 4.4 Reproductive system- HSG

### 4.5 Vascular system

- a) Angiography
- b) Venography
- c) Lymphangiography

### 4.6 CNS- Myelography

## I. Interventional Radiology

1. Definition and history of interventional radiology.
2. Comparison with diagnostic radiology.
3. Overview of common IR procedures (e.g., angiography, biopsy, catheter placements).
4. Tools and technologies used in IR (e.g., fluoroscopy, ultrasound).
5. Potential risks associated with IR procedures.
6. Strategies for minimizing complications.
7. Post-procedure care and monitoring.

## J. Use of Artificial Intelligence (AI) in the field of Radiodiagnosis

1. Understand the principles of AI and its applications in radiology.
2. Explore AI technologies and their impact on diagnostic imaging.
3. Evaluate the benefits and limitations of AI in radiodiagnosis.
4. Overview of AI and machine learning concepts.
5. Historical context of AI in medical imaging.
6. Current trends in healthcare AI.
7. Types of imaging modalities (X-ray, CT, MRI, Ultrasound).
8. Role of AI in enhancing image acquisition and interpretation.
9. Case studies on AI applications in various modalities.

## K. Role of Teleradiology in the field of Radio diagnosis

1. Definition and historical background.
2. Evolution of teleradiology in medical imaging.
3. Technical and logistical challenges in implementing teleradiology.
4. Concerns regarding data privacy and security.
5. Regulatory and legal considerations impacting practice.

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