

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान सेवा आयोग  
प्राज्ञिक सेवा, रेडियोलोजी समूह, सहायक प्राध्यापक पद, नौ ख (९ ख) तहको  
खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम  
**Paper II: Technical Subject**  
**Section (A) - 45 Marks**

1. **Physics in radiology**
  - 1.1 Production of x-rays
  - 1.2 Interaction of x-rays with metals
  - 1.3 X-ray tube
  - 1.4 Radiation protection
  - 1.5 Basic physics and advances in fluoroscopy/ imaging intensifier
  - 1.6 Basic physics and advances in CR/DR system
  - 1.7 Basic physics and advances in CT
  - 1.8 Basic physics and advances in MRI
  - 1.9 Basic physics and advances in USG
  - 1.10 Introduction to nuclear medicine
  
2. **Sectional and Imaging anatomy**
  - 2.1 Cross-sectional & imaging anatomy of brain
  - 2.2 Cross-sectional and imaging anatomy of chest
  - 2.3 Cross-sectional and imaging anatomy of Abdomen
  - 2.4 Anatomy of orbits and its bones
  - 2.5 Vascular anatomy of brain/head
  - 2.6 Vascular anatomy of abdominal aorta and its branches
  - 2.7 Vascular anatomy of upper and lower limbs
  - 2.8 Relevant Embryology
  
3. **Nervous system**
  - 3.1 Craniocerebral Trauma
  - 3.2 Imaging of non-traumatic SAH
  - 3.3 Imaging of non-traumatic ICH
  - 3.4 Imaging of stroke
  - 3.5 Cerebral ischemia
  - 3.6 Brain tumors and tumor like processes
  - 3.7 Extra-axial Tumors
  - 3.8 Imaging of sellar tumours
  - 3.9 Non-neoplastic and neoplastic spinal cord pathologies
  
4. **Head & Neck**
  - 4.1 Radiological imaging of diseases and conditions related to Ear, Nose, Throat
  - 4.2 Radiological imaging of diseases of thyroid, salivary gland and other soft tissue neck
  
5. **Paediatric imaging**
  - 5.1 Imaging of the kidneys and urinary tract in children
  - 5.2 Imaging of congenital CNS malformations
  - 5.3 Respiratory Distress

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6. **Recent advances in radiology and imaging**
  - 6.1 Teleradiology, Radiology Information System & PACS
  - 6.2 Newer advances in CR/ DR system, Fluoroscopy and Mammogram
  - 6.3 Newer advances in CT and MRI

**Section (B) - 55 Marks**

7. **CVS & Interventional**
  - 7.1 Radiological imaging of aortic and peripheral arterial diseases
  - 7.2 Radiologic approach to pulmonary thromboembolism
  - 7.3 Heart and pericardium
  - 7.4 Congenital and acquired heart disease
  - 7.5 Image guided radiological procedures and contrast media
8. **Musculoskeletal System**
  - 8.1 Skeletal trauma
  - 8.2 Radiological imaging of bone tumors
  - 8.3 Radiological imaging of large and small joints
  - 8.4 Haemopoietic bone disorder
  - 8.5 Osteomyelitis and septic arthritis
9. **Thoracic / respiratory system**
  - 9.1 Radiological imaging of Chest
  - 9.2 Chest trauma
10. **Gastrointestinal & hepatobiliary system**
  - 10.1 Imaging of non-neoplastic / neoplastic esophageal pathology
  - 10.2 Imaging of gastric pathology
  - 10.3 Liver neoplasms
  - 10.4 Inflammatory bowel disease
  - 10.5 Imaging and interventions in GI bleed
  - 10.6 Imaging of pancreatic neoplasm
11. **Genito-urinary system**
  - 11.1 Renovascular disease
  - 11.2 Genitourinary trauma
  - 11.3 Genito-urinary tumor
  - 11.4 Urinary bladder & Prostate imaging
12. **Breast and diagnostic ultrasound**
  - 12.1 Breast imaging
  - 12.2 Role of USG in IUGR
  - 12.3 Diagnostic ultrasound