

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 critical analysis Q -15 mark + 3 long Q- 30 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**  
**(1 critical analysis Q -15 marks + 4 long Q -40 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

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Following pattern will be used for formation of paper I & II as far as possible.

Paper I				
Part	Section	Weightage	No. Questions & Weightage	
			Objective Multiple Choice	Subjective
I	A	20		2 Questions x 10 Mark = 20
	B	30		3 Questions x 10 Mark = 30
II	C	25	25 Questions x 1 Mark = 25	
	D	25	25 Questions x 1 Mark = 25	
Paper II				
Section		Weightage	No. Questions & Weightage	
			Long answer	Critical Analysis
A		45	3 Questions x 10 Mark = 30	1 Questions x 15 Mark = 15
B		55	4 Questions x 10 Mark = 40	1 Questions x 15 Mark = 15

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