पाटन स्वास्थ्य विज्ञान प्रतिष्ठान, सेवा आयोग
प्राज्ञिक सेवा, रेडियोलोजी समूह, सहायक प्राध्यापक पद, नौं 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

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 Gentiurinary 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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