

**POST GRADUATE EXAMINATION, APRIL/MAY-2022**

**MD RADIODIAGNOSIS  
(PAPER ONE)**

**BASIC SCIENCES RELATED TO RADIODIAGNOSIS**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Enumerate interactions of ionizing radiations with matter. Describe in brief Compton scattering. (20)

**Q. 2.** Give a brief account of hazards of ionizing radiations and measures taken to protect a radiation worker from these hazards. (20)

**Q. 3. Describe briefly:** (3 x 10 = 30)

- a. Structure of a modern x-ray tube
- b. Fluorescence and its uses in diagnostic imaging
- c. Effects and control of scattered radiations

**Q. 4. Write short notes on:** (5 x 6 = 30)

- a. Rectifiers
- b. Latent image
- c. Heel effect
- d. Circle of Willis
- e. Segmental anatomy of liver

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**MD RADIODIAGNOSIS  
(PAPER TWO)**

**CLINICAL RADIOLOGY & RELATED PATHOLOGY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Enumerate causes of pain in right iliac fossa in a 25-year-old married female. Discuss the role of imaging in evaluation of this case. **(20)**

**Q. 2.** Briefly discuss the patho-physiology of Pulmonary Embolism. Describe the role of imaging in pulmonary thrombo-embolism. **(20)**

**Q. 3. Describe briefly:** **(3 x 10 = 30)**

- a. Role of HSG and MRI in diagnosis of female primary infertility
- b. Causes & imaging features of constrictive pericarditis
- c. Role of color Doppler and ultrasound in post renal transplant patient

**Q. 4. Write short notes on:** **(5 x 6 = 30)**

- a. Imaging in small bowel lymphoma
- b. Radio-imaging in choledochal cyst
- c. Truncus arteriosus
- d. Unilateral Hyperlucent hemithorax.
- e. Retroperitoneal fibrosis

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**MD RADIODIAGNOSIS  
(PAPER THREE)**

**CLINICAL RADIOLOGY & RELATED PATHOLOGY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Describe the general approach in diagnosing intracranial tumors. Discuss about imaging of pediatric brain tumors. **(20)**

**Q. 2.** Describe in detail importance of X-ray of both hands including forearms as an index of systemic diseases. **(20)**

**Q. 3. Describe briefly:** **(3 x 10 = 30)**

- a. Bone marrow lesions- diagnostic approach
- b. Doppler evaluation of lower limb veins
- c. Sacroilitis

**Q. 4. Write short notes on:** **(5 x 6 = 30)**

- a. Dandy-Walker malformation
- b. Orbital pseudotumor
- c. Type II neurofibromatosis
- d. Imaging features of neurosarcoidosis
- e. Imaging Lymph nodes of neck

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**POST GRADUATE EXAMINATION, APRIL/MAY-2022**

**MD RADIODIAGNOSIS  
(PAPER FOUR)**

**RECENT ADVANCES AND NUCLEAR MEDICINE IN RADIODIAGNOSIS**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Give an account of therapeutic interventions in liver tumours. **(20)**

**Q. 2.** Describe the mechanism of action, types, clinical applications and properties of a suitable ultrasound contrast agent. **(20)**

**Q. 3. Describe briefly:** **(3 x 10 = 30)**

- a. Diffusion weighted imaging (MRI) and its clinical applications
- b. Ultrasound elastography
- c. Role of PET and SPECT in cardiac imaging

**Q. 4. Write short notes on:** **(5 x 6 = 30)**

- a. Use of internet in radiology
- b. Analog vs digital mammography
- c. Cone beam vs fan beam CT
- d. Nephrogenic systemic fibrosis
- e. Role of PET- CT in lung tumours