

MANIPAL ACADEMY OF HIGHER EDUCATION
MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2022

PAPER I

Friday, April 01, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long questions:**

1. Describe the basic construction of an X-ray tube and its recent advances. (15 marks)

2. Discuss various anomalous pancreatico biliary drainage. (15 marks)

3. **Short Questions:**

- 3A. Paramagnetic contrast media
- 3B. Transrectal anatomy of prostate gland
- 3C. Intensifying screens
- 3D. Describe the cross sectional details of the conventional X-ray film and that of a one side coated film
- 3E. Piezo electric effect
- 3F. Anode Heel effect
- 3G. Sialography
- 3H. Rectification
- 3I. A.E.R.B and its controlling functions in radiology
- 3J. Factor affecting SNR in MRI

(7 marks × 10 = 70 marks)



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PAPER II

Saturday, April 02, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

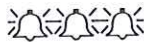
✍ **Long questions:**

1. Discuss the role of a radiologist in management of jaundice in an adult patient.
(15 marks)
2. Classify and mention causes of occupational lung diseases. Discuss the etiopathogenesis, imaging features & DD of silicosis.
(15 marks)

3. **Short Notes:**

- 3A. Imaging of vascular rings and slings
- 3B. Partial anomalous pulmonary venous drainage
- 3C. Enumerate the causes of honeycombing. Describe HRCT findings of Usual interstitial pneumonia
- 3D. Calcifications in malignant breast disease
- 3E. Carcinoid tumour
- 3F. Enumerate the mediastinal cysts. Imaging features of congenital mediastinal cysts
- 3G. Cystic neoplasms of pancreas
- 3H. Imaging in Cardiomyopathies
- 3I. Primary pulmonary tuberculosis
- 3J. Ultrasound in pancreatitis

(7 marks × 10 = 70 marks)



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PAPER III

Monday, April 04, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long Questions:**

1. Classify various orbital lesions. Describe imaging features of extraconal and conal mass lesions (exclude ocular and optic nerve lesions).

(15 marks)

2. Discuss the role of Radionuclide scan in evaluation of a skeletal lesion.

(15 marks)

3. **Short Questions:**

3A. Hypoxic ischemic encephalopathy

3B. MR imaging of the spinal bone marrow

3C. Fibromuscular dysplasia of renal artery

3D. Complications of meningitis

3E. Battered child syndrome

3F. Epispadiasextrophy complex

3G. Juvenile angiofibroma

3H. Chondromalacia of patella

3I. Adrenal incidentiloma

3J. MRI in Parkinsonism

(7 marks × 10 = 70 marks)



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PAPER IV

Tuesday, April 05, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL questions.

✍ Long questions:

1. Discuss the role of dynamic MR of kidneys for functional assessment. (15 marks)

2. MR imaging of the prostate and recent advances. (15 marks)

3. Short Notes:

3A. Arterial spin labeling MR imaging

3B. T2 relaxometry

3C. Imaging of breast implant

3D. Magnetization transfer imaging

3E. Vascular and biliary variants in the liver – implication for liver surgery

3F. MRI in endometrial pathologies

3G. In phase and out of phase MRI imaging

3H. Radiofrequency ablation of tumours

3I. Sleep MRI

3J. CT fluoroscopy

(7 marks × 10 = 70 marks)

