

Reg. No.									
----------	--	--	--	--	--	--	--	--	--

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (RADIODIAGNOSIS) DEGREE EXAMINATION – MAY 2021**

**PAPER I**

Monday, May 03, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Classify intravenous contrast media. What are the advantages of newer generation of contrast media? Discuss their adverse reactions.

(15 marks)

2. Discuss basic interaction of X-rays with matter.

(15 marks)

3. **Short Questions:**

3A. Segmental anatomy of liver and its importance

3B. Rotating Anode

3C. Piezo electric effect

3D. Personnel dosimetry systems

3E. Compton effect

3F. CT detectors

3G. Principles of dual energy computed tomography (DECT).

3H. Tomosynthesis.

3I. Blood brain barrier.

3J. Describe AERB guidelines on X-ray room installation.

(7 marks × 10 = 70 marks)



Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION  
MD (RADIODIAGNOSIS) DEGREE EXAMINATION – MAY 2021

PAPER II

Tuesday, May 04, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

✍ Long questions:

1. Discuss the development of aorta and its main branches. Elaborate on the anomalies of aorta.  
(15 marks)

2. Discuss the role of imaging in polyposis syndromes of GIT  
(15 marks)

3. Short Questions:

- 3A. Diaphragmatic rupture
- 3B. Bronchopleural fistula
- 3C. Intravascular catheters in chest
- 3D. Ventricular aneurysm
- 3E. Cardiac tumours
- 3F. Ebstein's anomaly.
- 3G. Mechanical small bowel obstruction
- 3H. CT Imaging of acute pancreatitis
- 3I. Ulcerative colitis
- 3J. Post operative breast imaging

(7 marks × 10 = 70 marks)



Reg. No.

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (RADIODIAGNOSIS) DEGREE EXAMINATION – MAY 2021**

**PAPER III**

Wednesday, May 05, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Discuss the role of imaging and management of female infertility.

(15 marks)

2. Enumerate tumors of sella and suprasellar regions. Describe imaging features of craniopharyngioma and its differential diagnosis in detail.

(15 marks)

3. **Short Questions:**

3A. Histiocytosis

3B. Intraduralextramedullary spinal tumors

3C. Abdominal wall defects in fetus

3D. Fallopian tube recanalisation

3E. Laser treatment of varicose veins in lower limb

3F. Mucocele of para-nasal sinus

3G. Filling defect in the urinary bladder

3H. Ankylosing spondylitis

3I. Optic nerve meningioma

3J. Lethal congenital dysplasia.

(7 marks×10 = 70 marks)



Reg. No.									
----------	--	--	--	--	--	--	--	--	--

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (RADIODIAGNOSIS) DEGREE EXAMINATION – MAY 2021**

**PAPER IV**

Thursday, May 06, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

---

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Discuss the advances in imaging and management of ischemic stroke.  
(15 marks)
  
2. Discuss the concept of molecular imaging. What are the various modalities used in molecular imaging? Elaborate on the role of MRI in molecular imaging.  
(15 marks)

**3. Short Questions:**

- 3A. Describe principle of Dual energy CT, different techniques of dual energy acquisition & various applications.
- 3B. Fast MRI techniques
- 3C. MRI CSF flow study
- 3D. Sleep MRI
- 3E. Microwave ablation
- 3F. Evidence based radiology
- 3G. Internet and radiology
- 3H. Advantage and disadvantages of CR & DR
- 3I. Factors affecting SNR in MRI
- 3J. MR lymphangiography

(7 marks × 10 = 70 marks)

