Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIO-DIAGNOSIS) DEGREE EXAMINATION – JANUARY 2025

(REGULAR)

PAPER I

Tuesday, January 14, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

✍ **Answer ALL questions.**

1. Describe the principles of computed radiography (CR).
2. Describe in brief the construction of transducers used in real time ultrasound.
3. Discuss the imaging anatomy of the orbit.
4. What steps would you take to reduce radiation dose to patient and radiation personnel during fluoroscopic procedures.
5. Discuss the anatomy and embryology of pancreas. Add a note on anatomic variations of the pancreatic duct.
6. What are isotopes? What is the principle of SPECT imaging.
7. Discuss MR instrumentation.
8. Discuss the MR imaging anatomy of the brachial plexus
9. Discuss the radiological anatomy of Hippocampus
10. Write a note on CT Enteroclysis

(10 marks × 10 = 100 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIO-DIAGNOSIS) DEGREE EXAMINATION – JANUARY 2025

(REGULAR)

PAPER II

Wednesday, January 15, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

✍ **Answer ALL questions.**

1. Discuss imaging anatomy of the osteomeatal complex and its role in planning endoscopic sinus surgery. Discuss the imaging of fungal sinusitis.
2. Role of imaging in Cardiac tumours.
3. What are the common pulmonary complications of patients in ICU. Discuss imaging of ARDS
4. Discuss the normal MRI anatomy, variants and pathologies of glenoid labrum
5. Describe the anatomy of visual pathway diagrammatically. Briefly discuss the common lesions along the pathway and define field defects caused by them.
6. Imaging in Cardiomyopathies.
7. What are the causes of diffuse cystic lung disease. Imaging features of pulmonary Langerhans cell histiocytosis and lymphangiomyomatosis.
8. Classify cartilaginous bone tumors. Discuss the role of imaging in evaluation of benign chondrogenic bone tumours.
9. Describe the role of imaging in degenerative disease of the spine. Briefly discuss imaging in post-operative spine.
10. Pre and post operative assessment in hemodialysis access surgery and intervention radiology of complications.

(10 marks × 10 = 100 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIO-DIAGNOSIS) DEGREE EXAMINATION – JANUARY 2025

(REGULAR)

PAPER III

Thursday, January 16, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

Answer ALL questions.

1. Define fetal hydrops. Enumerate its causes and describe its sonographic findings. (2+4+4 = 10 marks)

2. Describe in detail the various types of adrenal masses. Explain the various imaging modalities with salient findings to differentiate the masses. (5+5 = 10 marks)

3. Enumerate Percutaneous liver tumor ablation techniques and describe indications, contraindications, procedure and complications. (1+2+2+3+2 = 10 marks)

4. Role of radiology in intestinal ischemia (10 marks)

5. Role of USG and MRI in Placenta accreta spectrum (5+5 = 10 marks)

6. a) Neurogenic Bladder
   b) Pheochromocytoma (5+5 = 10 marks)

7. a) Varicocele
   b) Adenomyosis (5+5 = 10 marks)

8. a) GI manifestation of AIDS
   b) Choledochal cyst (5+5 = 10 marks)

9. Classify cystic diseases of the kidney, Describe the radiological and imaging features in polycystic kidney (4+6 = 10 marks)

10. a) Ovarian dermoid
    b) Fallopian tube recanalization (5+5 = 10 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIO-DIAGNOSIS) DEGREE EXAMINATION – JANUARY 2025

(REGULAR)

PAPER IV

Friday, January 17, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

Answer ALL questions.

1. MR vs CT myelogram.
2. Intraoperative ultrasound.
3. Captopril renogram
4. MRA in imaging of lower limb arteries.
5. Virtual Colonoscopy.
6. Describe principle of Dual energy CT, different techniques of dual energy acquisition and various applications.
7. Define strain and shear wave elastography: physics and their clinical applications.
8. What are the advantages of 3T MRI over 1.5T MRI? Comment on its limitations.
9. a) Fusion imaging.

   b) ELORA
10. MR urography

(10 marks × 10 = 100 marks)