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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (RADIOLOGICAL) DEGREE EXAMINATION – JULY 2023

PAPER I

Monday, July 03, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL questions.

✍ Long questions:

1. Discuss the principles, construction and functionalities of individual components of an image intensifier. Briefly describe the fluoroscopic imaging unit assembly.

(15 marks)

2. Discuss the upper and lower limb venous anatomy.

(15 marks)

3. Short notes:

3A. Scattered Radiation

3B. Personnel dosimetry systems

3C. Describe normal Anatomy of Knee as seen on MRI.

3D. Maximum permissible dose

3E. Describe anatomical variations in Circle of Willis with the help of a diagram. Enumerate the sites of intracranial aneurysm

3F. Transformer

3G. MR angiography

3H. Describe the cross sectional details of the conventional X-ray film and that of a one side coated film

3I. High KV technique in chest X-ray

3J. Co2 Angiography

(7 marks × 10 = 70 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
MD (RADIOLOGICAL DIAGNOSIS) DEGREE EXAMINATION – JULY 2023

PAPER II

Tuesday, July 04, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long questions:**

1. Discuss the Imaging of chest manifestations of AIDS.

(15 marks)

2. Enumerate the causes of lower GIT bleed and discuss the role of Radiology in evaluation and management of lower GI bleed.

(15 marks)

3. **Short questions**

3A. MRI in pericardial pathology

3B. Anorectal malformation.

3C. Lymphangitis carcinomatosa.

3D. Oesophageal atresia and tracheo-oesophageal fistula.

3E. Ultrasound in breast disease.

3F. Abdominal sonographic imaging in trauma.

3G. Pulmonary manifestations of Cystic fibrosis.

3H. Types of endoleak in post aortic aneurysm repair.

3I. Imaging features of fistula in ano.

3J. Aortic dissection.

(7 marks × 10 = 70 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (RADIODIAGNOSIS) DEGREE EXAMINATION – JULY 2023

PAPER III

Wednesday, July 05, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long Questions:**

1. Discuss the types and imaging features of retroperitoneal fibrosis.

(15 marks)

2. Discuss differential diagnosis of various space occupying lesions of the cerebellopontine angle.

(15 marks)

3. **Short Questions:**

3A. Thyroidophthalmopathy

3B. Osteoidosteoma

3C. Urachal anomalies

3D. Cavernousangioma

3E. Fluorosis

3F. Sonography in placenta

3G. Arnold Chairi malformation

3H. Perthe's disease

3I. Adrenal haemorrhage

3J. Neuropathic joint

(7 marks × 10 = 70 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (RADIODIAGNOSIS) DEGREE EXAMINATION – JULY 2023

PAPER IV

Thursday, July 06, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long questions:**

1. Discuss the role of MR perfusion in brain tumours.

(15 marks)

2. Discuss the role of advanced MR of breast tumours.

(15 marks)

3. **Short questions:**

3A. TRUS guided interventions

3B. MR Enteroclysis

3C. MR Tractography

3D. Cartilage imaging

3E. Imaging of the brachial plexus

3F. Intrauterine fetal intervention

3G. Cardiac stress imaging

3H. Carotid and vertebral artery dissection

3I. PET in evaluation of lymphoma

3J. Imaging in brain death

(7 marks × 10 = 70 marks)

