

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – OCTOBER 2019

SUBJECT: PAPER I: BASIC SCIENCES RELATED TO RADIOLOGY (IT CONSISTS OF ANATOMY, PATHOLOGY, BASIC AND RADIATION PHYSICS, IMAGING TECHNIQUES AND DARK ROOM PROCESSING)

Tuesday, October 08, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

✍ Long questions:

1. Discuss the basic principles of MR imaging.

(15 marks)

2. Discuss the imaging anatomy of the knee joint.

(15 marks)

3. Short questions:

3A. Compton effect

3B. Transformer

3C. Mobile x-ray unit

3D. Intra operative ultrasound

3E. Flat panel digital radiography

3F. Describe the anatomy of Gastro-oesophageal junction & imaging of hiatus hernia.

3G. Pregnancy and radiation

3H. Piezo electric effect

3I. Tomosynthesis

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

(7 marks × 10 = 70 marks)



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MD (RADIODIAGNOSIS) DEGREE EXAMINATION – OCTOBER 2019

SUBJECT: PAPER II: CVS, RESP, GIT (INCLUDING HEPATOBILIARY), ENDOCRINE,
CHEST, MAMMOGRAPHY

Wednesday, October 09, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the question.

✍ Long questions:

1. Discuss the role of a radiologist in management of a patient with vascular claudication pain.
(15 marks)
2. Imaging evaluation of suspected Venous thrombo embolism. What are the pitfalls in CT pulmonary angiography?
(15 marks)

3. Short questions:

- 3A. Double outlet right ventricle
- 3B. Cor triatriatum
- 3C. Heterotaxy syndromes
- 3D. Bronchial carcinoid
- 3E. Chest trauma
- 3F. Interstitial pneumonias
- 3G. CT Imaging of acute pancreatitis
- 3H. Anorectal malformation
- 3I. Ileocaecal tuberculosis
- 3J. Cystic lesions of the breast

(7 marks × 10 = 70 marks)



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MD (RADIODIAGNOSIS) DEGREE EXAMINATION – OCTOBER 2019

SUBJECT: PAPER III: GENITOURINARY, RETROPERITONEUM, CNS INCLUDING HEAD AND NECK, MUSCULOSKELETAL SYSTEM, OBST. & GYNAE, ENT AND EYE AND INTERVENTIONAL RADIOLOGY

Thursday, October 10, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

✍ Long questions:

1. Describe the etiology and pathogenesis of renovascular hypertension. Discuss in brief the role of various imaging modalities in evaluation of the condition.

(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 Notes:

3A. Retroperitoneal tumours and relevant imaging strategies

3B. Atlantoaxial dislocation

3C. Craniosynostosis

3D. Renal rickets

3E. Pseudotumours of kidney

3F. Thyroid ophthalmopathy

3G. Neuropathic joints

3H. MRI in evaluation of uterine anomalies

3I. MRI in Parkinsonism

3J. Diagnosis and intervention of epistaxis

(7 marks × 10 = 70 marks)



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MD (RADIODIAGNOSIS) DEGREE EXAMINATION – OCTOBER 2019

SUBJECT: PAPER IV: RECENT ADVANCES AND NUCLEAR MEDICINE RADIOLOGY
RELATED TO CLINICAL SPECIALITIES

Friday, October 11, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

✍ Long questions:

1. Recent trends in minimally invasive image guided therapies for hepatic malignancies.
(15 marks)
2. Discuss the principles of diffusion weighted imaging and its utility.
(15 marks)

3. Short questions:

- 3A. Newer MR contrast media.
- 3B. MRI in endometrial pathologies.
- 3C. In phase and out of phase MRI imaging.
- 3D. Digital Tomosynthesis in breast imaging.
- 3E. PET in evaluation of lymphoma.
- 3F. Imaging in brain death.
- 3G. Extended field of view ultrasound imaging.
- 3H. Describe principle of ultrasound elastography and its clinical applications.
- 3I. Speckle reduction imaging.
- 3J. CT fluoroscopy.

(7 marks × 10 = 70 marks)

