

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

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2018

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

Monday, April 02, 2018

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. What steps would you take to reduce radiation dose to patient and radiation personnel during fluoroscopic procedures.

(15 marks)

2. Discuss the CT anatomy of the temporal bone.

(15 marks)

3. **Short Questions:**

3A. Computed Radiography (CR) Artefacts

3B. Line focus principle

3C. Personnel dosimetry systems

3D. Time gain compensation (TGC) and dynamic range in ultrasound

3E. Post processing techniques in MDCT and their utility

3F. CSF pathways

3G. Factor affecting SNR in MRI

3H. Characteristic curve, latitude and gamma

3I. Myelography

3J. Nephrogenic systemic fibrosis

(7 marks × 10 = 70 marks)



Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION
MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2018
SUBJECT: PAPER II: CVS, RESP, GIT (INCLUDING HEPATO BILIARY),
ENDOCRINE, CHEST, MAMMOGRAPHY

Tuesday, April 03, 2018

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the question.**

✍ **Long Questions:**

1. Pathogenesis and imaging features of different stages of empyema. (15 marks)
2. Plain radiography in evaluation of acute abdomen. (15 marks)

3. **Short questions:**

- 3A. Meconium ileus
- 3B. Meckel's diverticulum
- 3C. Syndromes with GIT polyposis
- 3D. Post transplantlymphoproliferative disorder
- 3E. Role of Radio isotope in pulmonary embolism
- 3F. Pulmonary stenosis
- 3G. Subclavian steal syndrome
- 3H. Mention types of endoleak in post aortic aneurysm repair
- 3I. Imaging of vascular rings and slings
- 3J. Mammographic (views) projections

(7 marks × 10 = 70 marks)



Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2018

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

Wednesday, April 04, 2018

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Describe the calcium metabolism and discuss radiological changes in hyperparathyroidism.
(15 marks)
2. What are the causes of hematuria? Describe the imaging approach in a case of hematuria.
(15 marks)

3. **Short questions:**

- 3A. Neurocysticercosis
- 3B. Pyknodysostosis
- 3C. Alimentary tract anomalies diagnosable in utero
- 3D. Corpus callosum agenesis
- 3E. Solid/continuous periosteal reaction
- 3F. Xanthogranulomatous pyelonephritis
- 3G. Optic nerve meningioma
- 3H. Osteopetrosis
- 3I. Doppler finding in renal artery stenosis
- 3J. Atherosclerotic plaque assessment

(7 marks × 10 = 70 marks)



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

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2018

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

Thursday, April 05, 2018

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ **Answer ALL the questions.**

☞ **Long Questions:**

1. Describe the fundamentals of MR spectroscopy. Discuss its role in neuroimaging. (15 marks)
2. Discuss imaging of cerebral aneurysms and the recent trends in their management. (15 marks)

3. **Short questions:**

- 3A. MRI hepatobiliary specific contrast agent
- 3B. 3D & 4D ultrasound in fetal imaging
- 3C. USG in Rheumatoid arthritis
- 3D. Positional and kinematic imaging of spine
- 3E. Echoplanar imaging
- 3F. Cardiac stress imaging
- 3G. Carotid and vertebral artery dissection
- 3H. MR perfusion weighted imaging
- 3I. Nodal imaging on MR
- 3J. Techniques and applications of CT Colonography

(7 marks × 10 = 70 marks)

