Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2014

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

Tuesday, April 01, 2014

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

✍ **Answer ALL the questions.**

✍ **Long Essays.**

1. Discuss the principles and working of CR system in radiology.

(15 marks)

2. Discuss the basic physics and Instrumentation of a mammographic unit. What are the different mammographic projections?

(15 marks)

3. **Write short notes on:**

3A. Embryology and anatomy of pancreas
3B. Focal spot of X-ray tube
3C. X-ray beam restrictors
3D. CT Enterography
3E. Inversion Recovery sequence
3F. Ultrasound artifacts
3G. ICRP recommendations
3H. Instrumentations in MRI
3I. Blood brain barrier
3J. CT detectors

(7×10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2014

SUBJECT: PAPER II: CVS. RESP. GIT (INCLUDING HEPATO BILIARY), ENDOCRINE, CHEST, MAMMOGRAPHY

Wednesday, April 02, 2014

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

✍ **Answer ALL the question.**

✍ **Long Essays.**

1. Discuss various cyanotic congenital heart diseases.

(15 marks)

2. Discuss peritoneal spaces and role of imaging in omental lesions.

(15 marks)

3. Write short notes on:

3A. Focal nodular hyperplasia (FNH)

3B. Describe plain radiographic and CT findings of rt. upper lobe pulmonary collapse.

3C. Describe etiopathogenesis, common causes, plain film and Ct features of lymphangitiscarcinomatosis.

3D. Describe the technical aspects of HRCT of the lung.

3E. Pre and post operative assessment in hemodialysis access surgery

3F. Imaging in Cardiomyopathies

3G. Coronary artery anomalies

3H. Neuro enteric cyst

3I. Normal and abnormal extrinsic impressions on aesophagogram

3J. Mammographic signs of malignancy

(7×10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2014

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

Thursday, April 03, 2014

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

✍ **Answer ALL the questions.**

✍ **Long Essays.**

1. What are the different types of periosteal reactions? Discuss the imaging features of osteomyelitis.

(15 marks)

2. Discuss in brief imaging features of various infective diseases of the kidney.

(15 marks)

3. **Write short notes on :**

3A. Imaging in Otitis media
3B. Enchondroma
3C. Vesicoureteric reflux
3D. Hypertensive encephalopathy
3E. Osteochondroma
3F. Neurogenic bladder
3G. Atypical meningiomas
3H. Solitary bone cyst
3I. Pituitary microadenoma
3J. Hysterosalpingography

(7×10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2014

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

Friday, April 04, 2014

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

✍ **Answer ALL the questions.**

✍ **Long Essays.**

1. Describe the instrumentation and principles of Radiofrequency ablation. Discuss the indications, patient selection, procedure and complications of its various implications.

(15 marks)

2. Discuss the role of MRI in imaging of the myocardium.

(15 marks)

3. Write short notes on :

3A. MRI in bone marrow disease of the spine

3B. Flat panel detector CT

3C. What are the advantages of 3T MRI over 1.5T MRI? Comment on its limitations.

3D. MR elastography

3E. Constructive interference in steady state

3F. T2 relaxometry

3G. Computer aided detection system

3H. Cryotherapy

3I. Yttrium embolization

3J. Flat panel detector

(7×10 = 70 marks)