Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2016

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 18, 2016

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

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Discuss MR anatomy of cranial nerves.

(15 marks)

2. Discuss in detail the construction of a grid and explain how it helps in improving the radiographic quality.

(15 marks)

3. **Short Questions:**

3A. High KV technique in chest X-ray

3B. Rotating Anode

3C. Segmental anatomy of liver and its importance

3D. Computed Radiograpy (CR) Artefacts

3E. T-tube cholangiography

3F. Inversion Recovery sequence

3G. Filters in radiography and CT

3H. A.E.R.B and its controlling functions in radiology

3I. Ultrasonic display modes

3J. Post processing techniques in MDCT and their utility

(7 marks × 10 = 70 marks)

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MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2016

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

Tuesday, April 19, 2016

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

✍ **Answer ALL the question.**

✍ **Long Questions:**

1. Discuss the principles, techniques, advantages, limitations and complications of catheter angiography.

(15 marks)

2. Discuss the role of imaging in a 35 yr old female presenting with lower abdominal pain.

(15 marks)

3. **Short Questions:**

3A. Gas in the urinary tract

3B. Cholesterosis in gall bladder

3C. Esophageal motility disorders

3D. Radiographic and CT findings of asthma

3E. Metastatic lung lesion

3F. Mediastinallymphnodes and lymphatic drainage of the lungs

3G. Functional cardiac imaging

3H. Skeletal features in congenital cardiac anomalies

3I. Popliteal artery entrapment syndrome

3J. Benign breast conditions that mimic malignancy

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2016

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

Wednesday, April 20, 2016

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. Describe the role of MR spectroscopy in neuroimaging.

(15 marks)

3. **Short Questions:**

3A. Polycystic ovarian disease

3B. Vesico ureteral reflux

3C. Fluorosis

3D. Herpes encephalitis

3E. Renal angiomyolipoma

3F. Hypertrophic osteo arthropathy

3G. Normal pressure hydrocephalus

3H. Xanthogranulomatous pyelonephritis

3I. Osteomyelitis in infants

3J. MoyaMoya disease

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (RADIODIAGNOSIS) DEGREE EXAMINATION – APRIL 2016

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

Thursday, April 21, 2016

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

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Hepatobiliary contrast agents.

(15 marks)

2. Discuss the principles and basis of CT perfusion imaging and its various assessment parameters.

(15 marks)

3. **Short Questions:**

3A. Cine MR imaging and its utility

3B. Carotid stenting

3C. MR Imaging of placenta

3D. MRI in pelvic floor imaging

3E. Pharmacological agents used in cardiac CT and MRI

3F. Describe the principles of parallel imaging technology and its clinical applications

3G. USG in Rheumatoid arthritis

3H. Positional and kinematic imaging of spine

3I. Extended field of view ultrasound imaging

3J. Describe principle of ultrasound elastography and its clinical applications

(7 marks × 10 = 70 marks)