[LL 136] **OCTOBER 2017** **Sub. Code:**

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS
PAPER I – MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO DIAGNOSIS

Q.P. Code :202031

I. Elaborate on: **(2 x 15 = 30)**

1. Construction of conventional X-ray Tube, Dedicated digital X-ray advantages.

2. Describe the phenomenon of nuclear magnetic resonance. Describe the salient parts of a superconducting MRI system.

II. Write notes on: **(10 7 = 70)**

1. Role of collimators and filters in Radiology.
2. CT dose index.
3. Interaction of ultrasound with matter.
4. Anode heel effect.
5. Image reconstruction Algorithms in CT.
6. Diffusion weighted images in MRI.
7. Compton scatter.
8. Intensifying screens.
9. Characteristic curve of X-ray mammography.
10. Radiation dose limits for patients and radiation worker.

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2032

[LL 137] **Sub. Code:**

M.D. DEGREE EXAMINATION

BRANCH VIII RADIO DIAGNOSIS
PAPER II – RADIO DIAGNOSIS INCLUDING NUCLEAR MEDICINE

Q.P. Code :202032

Time : Three Hours **Maximum : 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Describe the various pathological types of Bronchogenic malignancy and their salient imaging features, Discuss the staging and the role of PET-CT in the evaluation.

2. Discuss the differential diagnosis of small bowel wall thickening. Describe the imaging features of Crohn's disease.

II. Write notes on: **(10 x 7 = 70)**

1. Imaging of aortic dissection.
2. Evaluation of Renal transplant by USG and Duplex doppler.
3. Bone dysplasias.
4. CT and MRI imaging features of Herpes encephalitis.
5. Nuclear imaging in Bone scan.
6. CT and MRI evaluation of Thyroid lesions.
7. Ring enhancing lesions of MRI brain.
8. Time signal intensity curves in MR mammography.
9. Neuropathic arthropathy – Causes and Imaging features.
10. Ventilation-Perfusion scintigraphy.

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[LL 138] **OCTOBER 2017** **Sub. Code:**

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS
PAPER III – RADIO DIAGNOSIS INCLUDING INSTRUMENTATION AND CONTRAST STUDIES

Q.P. Code :202033

Time : Three Hours **Maximum : 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss the MR spectroscopy and it's application in Brain.

2. Describe the radiological anatomy of prostate gland. What are the various imaging strategies used for diagnosis, staging and follow-up of prostatic malignancy?

II. Write notes on: **(10 7 = 70)**

1. Role CT angiography in Renal Donors.
2. Indications for cardiac MRI.
3. Radiological signs of pneumoperitoneum.
4. Imaging features of acute pyelonephritis.
5. Virtual bronchoscopy.
6. Management of a severe contrast reaction.
7. Differential diagnosis of pleura and vertebro plasty.
8. Imaging features of hypertrophic pyloric stenosis.
9. Technique and significance of nuchal translucency screening.
10. CT enteroclysis technique.

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[LL 139] **Sub. Code:**

M.D. DEGREE EXAMINATION

BRANCH VIII RADIO DIAGNOSIS
PAPER IV – RADIO DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES AND RECENT ADVANCES

Q.P. Code :202034

Time : Three Hours **Maximum : 100 Marks**

I. Elaborate on:

1. Describe the causes and imaging evaluation of non-traumatic sub-arachnoid hemorrhage in a 50 year old. Write a note on the neuro-interventional procedures that can possibly be done for the patient.

2. Describe the etiology, radiological evaluation and staging of avascular necrosis of femoral head. Write a note on the differential diagnosis.

II. Write notes on:

1. 'Crazy paving' pattern in Lung.
2. Calcium scoring in CT coronary Angiography.
3. Imaging features of Budd-Chiari syndrome.
4. CT grading of renal injury and role of MR renal angiography.
5. Inferior vena cava filters.
6. Imaging of adrenal lesions.
7. Differential diagnosis of lytic lesion in jaw.
8. Assessing normal myelination milestones in MRI.
9. Sonographic views and checklist in fetal echocardiography.
10. Total and partial anomalous pulmonary venous return.

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