

APRIL 2013

Sub. Code: 2031

M.D. DEGREE EXAMINATION

BRANCH VIII –RADIO DIAGNOSIS

MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO DIAGNOSIS

Q.P.Code: 202031

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Describe the Physical Principles of MRI.
2. Explain the functions of each layer of medical X-ray film. Discuss Principles and functions of intensifying screens and the steps in film processing.

II. Write notes on:

(10X7=70)

1. What does Inverse square Law state and give its application.
2. Discuss about photoelectric effect and its clinical applications.
3. Describe Hounsfield number.
4. Discuss the interaction between ultrasound and matter.
5. Discuss the function of image intensifier.
6. Describe with a neat sketch, about a Thermoluminescent dosimetry (TLD Badge)
7. Discuss the functioning of Automatic Processor.
8. Discuss vital parameters of Spiral CT
9. Write notes on Doppler Physics.
10. What are the advanced techniques in ultrasound machines. Describe tomographic ultrasound imaging (TUI).

(LC 137)

APRIL 2013

Sub. Code: 2032

M.D. DEGREE EXAMINATION

BRANCH VIII –RADIO DIAGNOSIS

RADIO DIAGNOSIS INCLUDING NUCLEAR MEDICINE

Q.P.Code: 202032

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Classify lymphomas.
Describe in detail the imaging features of thoracoabdominal lymphoma.
2. Describe the radiological evaluation of renovascular hypertension.

II. Write notes on:

(10X7=70)

1. Clinical applications of PET CT imaging in oncology
2. Radiological evaluation of acute stroke.
3. Solitary pulmonary nodule
4. Ebstein anomaly.
5. Skeletal features of Thalassemia.
6. Biliary atresia
7. Nonaccidental injury.
8. Mesenteric ischemia
9. Spiculate mass on mammogram
10. Use of scintigraphy in evaluation of hyperparathyroidism

(LC 138)

APRIL 2013

Sub. Code: 2033

M.D. DEGREE EXAMINATION

BRANCH VIII –RADIO DIAGNOSIS

**RADIO DIAGNOSIS INCLUDING INSTRUMENTATION AND
CONTRAST STUDIES**

Q.P.Code: 202033

Time: Three Hours

Maximum: 100 marks

(2X15=30)

I. Elaborate on:

1. Discuss in detail the imaging features of bone tumours of Osteoid origin.
2. Discuss the principle of MR Cholangiography and role in imaging of CBD lesions.

II. Write notes on: (10X7=70)

1. Crohn's disease – describe the radiological and imaging findings.
2. Give a note on low osmolar contrast media.
3. Intussusception – Radiological and Imaging findings.
4. Write a note on Superconductive magnets in MRI.
5. MR arthrogram shoulder – explain the technique and findings in rotator cuff tear
6. Write the technique of Water's view with the help of a neat sketch.
7. Role of ultrasound in first trimester of Pregnancy.
8. Classify Internal hernias, describe findings of Paraduodenal hernias.
9. Give a note on Anorectal malformation.
10. Hiatus hernia – enumerate the types and give their findings in Barium Swallow.

(LC 139)

APRIL 2013

Sub. Code: 2034

M.D. DEGREE EXAMINATION

BRANCH VIII –RADIO DIAGNOSIS

RADIO DIAGNOSIS INCLUDING INTERVENTIONAL
PROCEDURES AND RECENT ADVANCES

Q.P.Code: 202034

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Enumerate the causes of haemoptysis and role of Bronchial artery embolisation.
2. Discuss the Interventional procedures of Kidney and its blood vessels.

II. Write notes on:

(10X7=70)

1. TIPSS (Transjugular intrahepatic portosystemic shunt) – Explain procedure and complications.
2. Explain the procedure of CT guided biopsy of Lung.
3. Write notes on functional MRI of Brain.
4. Carotid Cavernous Fistula – Imaging findings.
5. Describe a flat panel detector – in Direct Digital Radiography.
6. Diffusion weighted sequences – Physics and its applications.
7. Role of Intravascular ultrasound in diagnosis of vascular lesions.
8. Radiofrequency ablation – Procedure and applications.
9. Write notes on Femoroacetabular impingement 10. Give an account on foetal MRI.
