

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

**PAPER I – MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO
DIAGNOSIS**

Q.P.Code: 202031

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

I. Elaborate on: (2 x 15

= 30)

1. Discuss in detail a modern X-ray tube and write about X-ray artifacts.
2. Discuss in detail radiation protection and patient doses in diagnostic imaging. Write a note on dose reduction in CT.

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

1. Window level and Window width.
2. Piezoelectric effect and its clinical applications.
3. Heel effect and its role in mammography.
4. Half value layer.
5. Radiation units.
6. Photoelectric effect
7. Computed Radiography.
8. Beam restrictors.
9. Digital radiography (DR).
10. Physics of MRI principles.

APRIL 2015

Sub. Code: 2032

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

Answer ALL questions

**(2 x 15
= 30)**

I. Elaborate on:

1. Describe the Embryology and development of the pancreas. Describe the imaging features of congenital anomalies of the pancreas.
2. Describe the normal anatomy of coronary arteries and discuss the role of isotope imaging in coronary artery diseases.

II. Write notes on:

(10 x 7 = 70)

1. Skeletal scintigraphy.
2. Define pulmonary sequestration. Describe its types & discuss CT findings.
3. Thoracic diseases associated with HIV Infection.
4. HRCT features of Cryptogenic organizing pneumonia.
5. Diagnostic criteria and imaging features of Emphysematous pyelonephritis.
6. Isotope imaging in pediatric renal problems.
7. Radiological evaluation and intervention in acute cholecystitis.
8. Adrenal incidentaloma.
9. Pediatric renal tumors.
10. Principles of PET imaging.

[LG 138]

APRIL 2015

Sub. Code: 2033

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

**PAPER III – RADIODIAGNOSIS INCLUDING INSTRUMENTATION AND
CONTRAST STUDIES**

Q.P.Code: 202033

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

(2 x 15

= 30)

I. Elaborate on:

1. Describe the general approach in diagnosing intracranial tumors. Discuss about imaging of pediatric brain tumors.
2. Discuss the causes of portal hypertension. Write in detail about Sonographic evaluation of cirrhosis and portal hypertension.

II. Write notes on:

(10 x 7 = 70)

1. Doppler evaluation of lower limb veins.
2. Imaging of adrenal incidentaloma.
3. Barium techniques in Hirschsprung disease.
4. CNS manifestations in HIV.
5. Diffusion-Perfusion mismatch.
6. Lung manifestations in connective tissue disorders and role of HRCT.
7. Radiology of Non accidental injuries.
8. Causes and evaluation of Sacroiliitis.
9. Antenatal diagnosis of Down's syndrome.
10. Causes and imaging features of progressive massive fibrosis.

[LG 139]

APRIL 2015 Sub. Code:

2034

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

**PAPER IV – RADIODIAGNOSIS INCLUDING INTERVENTIONAL
PROCEDURES AND RECENT ADVANCES**

Q.P.Code: 202034

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

**(2 x 15 =
30)**

I. Elaborate on:

1. Role of interventional radiology in diagnosis and management of hepatobiliary system disorders.
2. Discuss about extra axial lesions of brain. Write in detail the role of spectroscopy in brain tumors.

II. Write notes on:

(10 x 7 = 70)

1. Doppler evaluation of transplant kidney.
2. Imaging features of angiomyolipomas.
3. Importance of MR sequences.
4. Clinical application of susceptibility weighted imaging.
5. Sclerotic metastasis and role of CT guided interventions.
6. Techniques of MRCP in pancreatic anomalies.
7. Brain herniations and imaging.
8. Crystal deposition arthritis - diagnosis by radiology.
9. Role of radiologist in evaluation of urinary bladder rupture.
10. Benign Vs malignant vertebral collapse assessments by imaging.
