

Roll no.

P-2732

M.D. EXAMINATION, APRIL, 2008

M.D. – RADIO-DIAGNOSIS

(Paper - I)

(Basic Sciences and Physics as applied to Radio-diagnosis)

Time : 3 hours

Maximum Marks – 100

Note : Attempt all questions.

1. Diffusion weighted imaging and clinical applications. 10 marks
 2. Anatomy and contents of cavernous sinus. 10 marks
 3. Embryological development and normal anatomy of pancreatic duct. 10 marks
 4. Ultrasound contrast media and clinical applications. 10 marks
 5. Blood supply of small and large bowel. 10 marks
 6. Sialography technique, indications and major findings. 10 marks
 7. X-ray tube anode. 10 marks
 8. Intracranial vascular interventions. 10 marks
 9. PNDT Act. 10 marks
 10. Position emission tomography. 10 marks
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Roll no.

P-2733

M.D. EXAMINATION, APRIL, 2008

M.D. – RADIO-DIAGNOSIS

(Paper – II)

(Clinical Radio-diagnosis and Applied Pathology)

Time : 3 hours

Maximum Marks – 100

Note : Attempt all questions.

1. Discuss the current status of imaging in lung cancer. 25 marks
2. How will you evaluate a patient presenting with obstructive jaundice using various imaging modalities ? 25 marks
3. Write notes on : 10 marks each
 - (a) Budd-Chiari Syndrome
 - (b) Necrotizing Colitis
 - (c) Pathology of urinary tract tuberculosis
4. Describe briefly : 10 marks each
 - (a) CT and ultrasonographic features of acute appendicitis
 - (b) Plain radiographic features of hyperparathyroidism

Roll no.

P-2734

M.D. EXAMINATION, APRIL, 2008

M.D. – RADIO-DIAGNOSIS

(Paper – III)

(Recent Advances in Radio-diagnosis)

Time : 3 hours

Maximum Marks – 100

Note : Attempt all questions.

1. Discuss the various advanced techniques in MRI and their clinical applications in brain. 25 marks
 2. Write short notes on :
 - (a) High resolution Ultrasonography in the diagnosis of the lesions of anterior abdominal wall 13 marks
 - (b) Alternative breast imaging approaches 12 marks
 3. Write short notes on :
 - (a) 1.5 Tesla MRI v/s 3 Tesla MRI 9 marks
 - (b) Isotopes in parathyroid imaging 8 marks
 - (c) CT perfusion study 8 marks
 4. Write short notes on :
 - (a) Cardiac CT 9 marks
 - (b) Radiofrequency ablation of tumours 8 marks
 - (c) Role of ultrasound in detection of antenatal foetal malformation 8 marks
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Roll No.

P-61

M. D. EXAMINATION, April/May, 2009

RADIODIAGNOSIS

Paper First

**(Radiological Medical Physics, Radiological Anatomy,
Radiography, Radiological Technique Contrast Drugs)**

Time : Three Hours]

[Maximum Marks : 100

Note : Answer all questions.

1. Discuss the Anatomy of Retroperitoneal spaces. Discuss the imaging evaluation of Primary Retroperitoneal Neoplasms in children. 33
2. Write short notes on the following : 11 each
 - (i) Pulse Fluoroscopy
 - (ii) M. R./Contrast Media
 - (iii) CT Entrography
3. Briefly discuss the following : 17 each
 - (a) Pathophysiology of Pyelonephritis
 - (b) Radiata safety measures for patients of Paediatric Age group

Roll No.

P-62

M. D. EXAMINATION, April/May, 2009

RADIODIAGNOSIS

Paper Second

(Clinical Radiodiagnosis)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt all questions.

1. Discuss radiological approach in management of acute Subarachnoid Bleed. 25
2. Write short notes on the following : 10 each
 - (i) Cystic diseases of kidney
 - (ii) Ebstein Anomaly
 - (iii) Malignant Fibrous Histiocytoma
 - (iv) Acute Tubular Necrosis
3. Write Radiological approach in the following :
 - (i) Congenital Acyanotic Heart disease 15
 - (ii) Ischaemic stroke 10
 - (iii) Sacro-ilitis 10

M. D. EXAMINATION, April/May, 2009

RADIODIAGNOSIS

Paper Third

(Clinical Radiodiagnosis and Applied Pathology)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt all questions.

1. Discuss the pulmonary manifestations of acquired immune deficiency syndrome (AIDS). 25
2. How will you proceed to investigate a case of Haemetemesis ?
Describe the Radiological findings and the various interventional procedure in Portal Hypertension. 25
3. Mention the various malignant tumours of the pancreas and their Radiological features.
Briefly discuss the role of magnetic resonance imaging in pancreatic neoplasms. 25
4. Write short notes on the following :
 - (i) Necrotizing enterocolitis 8
 - (ii) Orbital pseudotumours 8
 - (iii) Role of PET in breast carcinoma 9

20

Roll No.

P – 64

M. D. EXAMINATION, April/May, 2009

RADIODIAGNOSIS

Paper Fourth

(Recent Advances in Radiology)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt all questions. All questions carry equal marks.

1. Describe in detail Digital Subtraction Angiography Technique. What are the disadvantage of Dual Energy Substraction ? 25
 2. Describe in brief the following :
 - (i) Elastography 8
 - (ii) Molecular imaging 7
 - (iii) Newer Ultrasound/Contrast Media 10
 3. Describe the current trends in management of Obstructive Jaundice. 25
 4. Write short notes on the following :
 - (i) Coronary/Calcium Score 8
 - (ii) Sono Hysterosalpingography 7
 - (iii) Virtual Endoscopy 5
 - (iv) 3 D vs 4D Ultrasonography 5
- 20

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POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. Enumerate various types of interactions between X & γ rays and matter. Describe one of these which plays most important role in diagnostic imaging. (20)
- Q. 2. Draw a labeled diagram showing the structure of a modern diagnostic X-ray tube and electrical circuit of X-ray generation. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Effects and control of scattered radiations
 - b. Radiation hazards and protection of radiation worker
 - c. Technique and indications of a lateral decubitus film.
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Technique and indications of M.C.U.
 - b. Biological effects of X-rays
 - c. Radiographic anatomy of kidney
 - d. Radiographic contrast materials
 - e. Intensifying screens

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

MD RADIODIAGNOSIS

(PAPER TWO)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. Describe the anatomy of biliary tree. Discuss the role of various radiological investigations for evaluating it in recent day practice. (20)
- Q. 2. Describe in details about imaging and approach to adrenal lesion. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Imaging in aortic arch anomalies
 - b. BI- RAD classification for reporting of mammography
 - c. Ultrasonography in first trimester bleeding
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Pleural tumours
 - b. Renovascular hypertension
 - c. CT Entero clysis
 - d. Vesico- Ureteric Reflux
 - e. Endocrine tumour of pancreas

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

**MD RADIODIAGNOSIS
(PAPER THREE)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. Describe the radiological investigations of the infratentorial tumors of Brain? What are the various radiological features of various infratentorial tumors of Brain? (20)
- Q. 2. An Adolescent patient complaints of proptosis of right eye, how will you investigate radiologically? What are the various Radio-Pathological features of orbital tumors? (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- Sialography
 - Fractures of facial bones
 - Four (4) Vessel Angiography
- Q. 4. Write short notes on: (5 x 6 = 30)
- Dentigerous Cyst
 - Cysticercosis
 - Hyaline Membranes Disease of Infants
 - Embryoma
 - Posterior urethral valve

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

**MD RADIODIAGNOSIS
(PAPER FOUR)**

RECENT ADVANCES AND NUCLEAR MEDICINE

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. Discuss the relative merits of MR and CT Imaging in hyperacute ischemic stroke. (20)
- Q. 2. What is high resolution C.T.? Describe its technique and its role in lung diseases. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
 - a. 3D Vs 4D Ultrasonography
 - b. Role of isotopes in diseases of Kidney.
 - c. Doppler evaluation of acute scrotal lesions.
- Q. 4. Write short notes on: (5 x 6 = 30)
 - a. 1.5 Tesla MRI Vs 3 Tesla MRI
 - b. Cardiac CT
 - c. CT perfusion study
 - d. Macleod's Syndrome
 - e. Virtual Endoscopy

POST GRADUATE EXAMINATION, APRIL- 2012

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagnosis.

- Q. 1.** Discuss the role of image intensifier and its various advantages in recent invasive radiology. (20)
- Q. 2.** Draw a labeled diagram of digital radiography. Discuss its advantages and disadvantages with reference to computerized radiography. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Radiation protection
 - b. Photoelectric effect
 - c. GRID
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Intensifying screen
 - b. Developer
 - c. Heal effect
 - d. Xero- Radiography
 - e. Elastography Breast

POST GRADUATE EXAMINATION, APRIL- 2012

**MD RADIODIAGNOSIS
(PAPER TWO)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagnosis.

- Q. 1.** Discuss different techniques available for the radiological assessment of pancreas. Describe in detail the tumors of pancreas. (20)
- Q. 2.** Give a description of congenital respiratory abnormalities. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Double contrast barium enema examination
 - b. Early gastric carcinomas and role of radiology in their detection
 - c. Percutaneous bile duct interventions
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Transoesophageal echocardiography
 - b. Choledochal cyst
 - c. Pheochromocytoma of adrenal gland
 - d. Ultrasound in endometrial abnormalities
 - e. MRI findings in urinary bladder carcinoma

POST GRADUATE EXAMINATION, APRIL- 2012

MD RADIODIAGNOSIS

(PAPER THREE)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagnosis.

- Q. 1.** Describe various interventional procedures done in patient suffering from cancer. (20)
- Q. 2.** Discuss in detail the radiological evaluation of a child having a lump in lumbar region. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. R.D.S. in Neonatal age group
 - b. Role of nuclear medicine in myocardial infarction
 - c. Posterior urethral valve
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Gout
 - b. Chondromatosis
 - c. Myositis ossificans
 - d. M.R. Cisternography in the diagnosis of CSF
 - e. Sialadenitis

X

POST GRADUATE EXAMINATION, APRIL- 2012

MD RADIODIAGNOSIS

(PAPER FOUR)

RECENT ADVANCES & NUCLEAR MEDICINE

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagnosis.

- Q. 1.** Enumerate the techniques in functional MRI. Discuss the clinical applications of MR tractography. (20)
- Q. 2.** Describe the techniques of CT enteroclysis. Enumerate its indications, advantages and limitations. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Role of radiofrequency ablation in the management of hepatocellular carcinoma.
 - b. Digital breast tomosynthesis (DBT) and its clinical applications.
 - c. Role of scintigraphy in cardiac imaging for myocardial perfusion and viability.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Tissue Harmonic Imaging of small parts
 - b. CT angiography of aortic aneurysms
 - c. MRCP vs ERCP
 - d. Diffusion weighted imaging in prostatic malignancy
 - e. FDG – PET in lymph node imaging

POST GRADUATE EXAMINATION, SEPTEMBER- 2012

MD RADIODIAGNOSIS

(PAPER ONE)

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe nuclear magnetic resonance phenomena and its uses in medical science. (20)
- Q. 2.** Describe the various radiographic factors which are considered during exposing a film. What is latent image? (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Reactions to radiological contrast media and management to reactions.
 - b. Adverse effects of X-rays
 - c. Film faults
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Advantages of 64-slice MDCT
 - b. Principles of sonography
 - c. Thermoluminescence dosimetry
 - d. Digital Radiography
 - e. Automatic film processing

POST GRADUATE EXAMINATION, SEPTEMBER - 2012

MD RADIODIAGNOSIS

(PAPER TWO)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss briefly the ultrasound anatomy of female pelvic organs. Give a description of ovarian tumours. (20)
- Q. 2.** What are the essential technical features of a mammography machine to get high quality images?
Write down various abnormal signs on mammography in pathologies of breast. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Role of CT in pulmonary thromboembolism
 - b. Atrial septal defect
 - c. Ultrasonography in liver cirrhosis
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Congenital diaphragmatic hernias
 - b. Ultrasound findings in acute pancreatitis
 - c. Ureterocoeles
 - d. Percutaneous gastrostomy
 - e. Testicular torsion

X

POST GRADUATE EXAMINATION, SEPTEMBER - 2012

MD RADIODIAGNOSIS

(PAPER THREE)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss the role of radioimaging in the diagnosis of pain in right hip of a child? (20)
- Q. 2.** Classify spinal tumours. How will you diagnose an intramedullary tumour radiologically? (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Carotid body tumour
 - b. Avascular necrosis
 - c. Carotid angiography and embolization of aneurism of brain
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Pseudotumor of eye
 - b. Hyaline membrane disease
 - c. Chondromalacia
 - d. Torus fracture
 - e. Cysticercosis

X

POST GRADUATE EXAMINATION, SEPTEMBER - 2012

**MD RADIODIAGNOSIS
(PAPER FOUR)**

RECENT ADVANCES & NUCLEAR MEDICINE

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the principle of ultrasound elastography and its clinical application. Briefly discuss its usefulness in evaluation of BIRAD 3 lesions. (20)
- Q. 2.** Enumerate the clinical uses of MR spectroscopy in disorders and diseases of the brain. Briefly discuss its role in evaluation of brain tumours. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. MRCP
 - b. CT vs MR enteroclysis for assessment of small bowel disease
 - c. Interventions in upper urinary tract obstructions
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Percutaneous Vertebroplasty
 - b. Clinical applications of 3T MRI
 - c. Tomosynthesis and its clinical applications
 - d. Interventional management of deep vein thrombosis
 - e. Clinical applications of dual energy CT

POST GRADUATE EXAMINATION, MAY- 2013

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

Note: Illustrate with suitable diagrams.

Q. 1. Discuss the evolution of angiography equipment to its present form. (20)

Q. 2. Explain various steps and methods of CT scan image reconstruction after data acquisition. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Stochastic versus non – stochastic effects of radiation.
- b. K- Space
- c. Various types of ultrasound transducers.

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Planning radiology department
- b. Endoluminal GI contrast media
- c. MRCP
- d. Concept of 3D/4D ultrasound
- e. eGFR in present day radiology.

X

POST GRADUATE EXAMINATION, MAY- 2013

MD RADIODIAGNOSIS

(PAPER TWO)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Enumerate retroperitoneal masses in children. Discuss any one of them in detail. (20)
- Q. 2.** Give indications, advantages and disadvantages of mammography vs sonomamography vs MRI breast in a patient with breast malignancy. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Empyema thoracis
 - b. Takayasu's disease
 - c. Multiple endocrine neoplasia
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. MRI in carcinoma cervix
 - b. Ureterocele
 - c. Splenomegaly
 - d. Klatzkin tumor
 - e. MR lymphangiography

X

POST GRADUATE EXAMINATION, MAY- 2013

MD RADIODIAGNOSIS

(PAPER THREE)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Define phakomatosis. Name the various disorder of this group and describe the clinical manifestation and radiological features of any one in detail. (20)
- Q. 2.** Write briefly about the radiological, clinical and genetic features of sclerosing bone dysplasias. What is the pathophysiology of these lesions? Name the various disorders of this group with radiological findings. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Describe the various abnormalities of optic nerve sheath complex. Describe the imaging findings of these lesions.
 - Describe the various imaging guided practical procedures in breast lesions.
 - How you will perform CT angiography? What are its indications and what is the importance of calcium scoring?
- Q. 4.** Write short notes on: (5 x 6 = 30)
- TRDN
 - Cystic lesions of jaw.
 - Role of various imaging modalities in unilateral proptosis.
 - Ultrasound features of common thyroid and parathyroid lesions.
 - PNETS.

POST GRADUATE EXAMINATION, MAY- 2013

MD RADIODIAGNOSIS

(PAPER FOUR)

RECENT ADVANCES & NUCLEAR MEDICINE

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the principle of ultrasound elastography and its clinical applications. Discuss its usefulness of birad 3 lesions. (20)
- Q. 2.** Describe in detail digital subtraction angiography technique. What are the disadvantages of dual energy subtraction? (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Scintigraphic evaluation of G.I. bleeding.
 - b. Interventions in upper urinary tract obstruction.
 - c. HRCT patterns in idiopathic interstitial pneumonias (IIP).
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Principles and clinical applications of bold imaging.
 - b. MDCT in pulmonary embolism
 - c. CT vs MR enteroclysis for assessment of small bowel disease.
 - d. Radiographic and MR features of congenital hip dysplasia.
 - e. PACS in radiology

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the radiological anatomy of the gastro-esophageal junction. (20)
- Q. 2.** Describe the principle and advantages of PET-CT. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Radiation protection of personnel working in department of radiodiagnosis.
 - b. Epilepsy protocol.
 - c. Various types of ultrasound transducers.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Radiographic grid.
 - b. Contrast media in ultrasonography.
 - c. Digital mammography.
 - d. Coronary Angiography
 - e. eGFR in present day radiology.

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

MD RADIODIAGNOSIS

(PAPER TWO)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss the pathology and role of imaging in small bowel lymphoma. (20)
- Q. 2.** Discuss the imaging and interventions in lower urinary tract lesions. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Imaging in splenic trauma.
 - b. Pulmonary lesions in AIDS.
 - c. Renal tuberculosis.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Congenital lesions of pancreas.
 - b. Imaging in aneurysm of arch of aorta.
 - c. Mitral valular heart disease.
 - d. MRI in carcinoma of cervix.
 - e. Vesico ureteric reflux.

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

**MD RADIODIAGNOSIS
(PAPER THREE)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss the differential diagnosis and imaging techniques available to assess a lytic lesion in the upper tibial metaphysis of a child of 14 years. (20)
- Q. 2.** Enumerate the various neuro-cutaneous syndromes and describe imaging in any two of these. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Role of ultrasound and color Doppler in a case of white reflex in a child.
 - b. Role of imaging in Leukodystrophies.
 - c. Radiographic and sonographic features of developmental dysplasia of Hip.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Intramedullary neoplasms of spinal cord.
 - b. Role of USG in thyroid diseases.
 - c. TIPS.
 - d. Intervention in SAH.
 - e. Mammographic features of carcinoma breast.

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

**MD RADIODIAGNOSIS
(PAPER FOUR)**

RECENT ADVANCES & NUCLEAR MEDICINE

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the current concepts in imaging of cerebrovascular stroke. (20)
- Q. 2.** Describe imaging methods for investigation of renovascular hypertension and its findings. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Virtual endoscopy.
 - b. Sonohystereo salpingography.
 - c. 3D vs. 4D ultrasonography.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. G.I. Lymphoma.
 - b. Molecular imaging.
 - c. Nuclear medicine findings in bone lesions.
 - d. Ultrasound contrast media.
 - e. M.R. spectroscopy.

POST GRADUATE EXAMINATION, APRIL - 2015

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Discuss the technical parameters of a mammographic X-ray unit, role of digital mammography including its advantages and limitations and various interventional procedures related to it. (20)

Q. 2. Describe the basic lung anatomy on high resolution computed tomography with diagrammatic illustrations. Enumerate the segmental anatomy of lungs. (20)

Q. 3. Describe briefly: (3 x 10 = 30)
a. MR contrast media.
b. Scatter radiation and its effects.
c. Basic principle of PET scan and radio-isotopes used in it.

Q. 4. Write short notes on: (5 x 6 = 30)
a. Dual energy CT.
b. Dark room illumination.
c. Macro- radiography.
d. Rare earth screens.
e. Types of films used in radiology.

POST GRADUATE EXAMINATION, APRIL - 2015

MD RADIODIAGNOSIS

(PAPER TWO)

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss the portal hypertension; its radiological diagnosis and interventional therapy. (20)
- Q. 2.** Describe the technique and appearance of double contrast study of the upper GIT. Compare it with conventional single contrast technique and endoscopy. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- Describe fetal circulation and high-risk obstetric application of color Doppler.
 - Imaging and interventions in Budd Chiari syndrome.
 - Pathology and imaging in gastric lymphoma.
- Q. 4. Write short notes on:** (5 x 6 = 30)
- Endocrine tumors of the pancreas.
 - Endoscopic ultrasonography.
 - Renal artery stenosis and therapeutic intervention by radiologist.
 - Abdominal aortic aneurysm.
 - Imaging in acute chest trauma.

POST GRADUATE EXAMINATION, APRIL - 2015

**MD RADIODIAGNOSIS
(PAPER THREE)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Discuss the etiology, pathology and radiology of osteomyelitis. Describe the roentgen features which will help in making specific diagnosis of etiology. **(20)**

Q. 2. Describe the anatomy & pathological lesions of triangles of neck. **(20)**

Q. 3. Describe briefly: **(3 x 10 = 30)**

- a. Radiological management of liver metastasis.
- b. Role of ultrasound in neonatal brain and technique of ultrasonography cranium.
- c. Midline tumours in paediatric age group.

Q. 4. Write short notes on: **(5 x 6 = 30)**

- a. PTC
- b. Role of radionuclides in bone imaging.
- c. Retinoblastoma.
- d. Hirschsprung's disease.
- e. Bone Mineral Density Study.

X

POST GRADUATE EXAMINATION, APRIL - 2015

**MD RADIODIAGNOSIS
(PAPER FOUR)**

RECENT ADVANCES AND NUCLEAR MEDICINE IN RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe in detail about MR spectroscopy and its clinical applications. (20)
- Q. 2.** Describe in detail about advancement in breast imaging approach. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. MRI contrast agents.
 - b. Virtual CT colonoscopy.
 - c. Role of nuclear medicine in skeletal diseases.
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. High resolution sonography in pediatric GIT.
 - b. 7 Tesla MRI
 - c. PET- CT
 - d. Post processing in MDCT
 - e. PACS

X

POST GRADUATE EXAMINATION, MAY - 2016

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** What is ALARA principle? Discuss in brief about radiation protection of radiologist, radiographer, patient and common population. (20)
- Q. 2.** Discuss principle of HRCT. Draw and discuss cross sectional anatomy of upper abdomen. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. PC PNDT Act.
 - b. MR mammography
 - c. Digital radiography (DR) system
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. TLD
 - b. Hounsfield number
 - c. Ultrasound contrast media
 - d. Causes of X-ray tube failure
 - e. Micturating cystourethrogram

X

POST GRADUATE EXAMINATION, MAY - 2016

**MD RADIODIAGNOSIS
(PAPER TWO)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the DD of reticular nodular shadowing. Describe the X ray findings, staging and HRCT findings in sarcoidosis. (20)
- Q. 2.** Twenty five years old male patient presents with hypertension. Discuss differential diagnosis, approach to imaging and Radiologist's role in management of the patient. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Imaging in Pulmonary thrombo embolism
 - b. Myocardial perfusion studies in nuclear medicine
 - c. Imaging renal transplant patients
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. Fallot's tetralogy
 - b. Imaging in gastric volvulus
 - c. Investigations for uterine evaluation
 - d. Trans-hepatic biliary drainage
 - e. Ground glass opacity in HRCT- significance and DD

X

POST GRADUATE EXAMINATION, MAY - 2016

**MD RADIODIAGNOSIS
(PAPER THREE)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe with diagram the anatomy of circle of Willis. Discuss imaging protocol of sub-arachnoid hemorrhage. (20)
- Q. 2.** Discuss differential diagnosis and imaging features of a painless, expansile lesion involving single rib in adult. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Posterior fossa neoplasms of childhood
 - b. Plain X-ray film features of acromegaly
 - c. Pyknodysostosis
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Malignant tumors of larynx
 - b. Radiology of orbital masses
 - c. Dandy walker cyst
 - d. PET imaging in oncology
 - e. Carotid plaque

X

POST GRADUATE EXAMINATION, MAY - 2016

**MD RADIODIAGNOSIS
(PAPER FOUR)**

RECENT ADVANCES AND NUCLEAR MEDICINE IN RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss principles, technique and clinical applications in magnetic resonance spectroscopy. (20)
- Q. 2.** Discuss the advanced imaging techniques in management of obstetric care. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Percutaneous vertebroplasty
 - b. Digital radiography versus computed radiography
 - c. MRI elastography
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. Nanotechnology in medicine
 - b. Intravascular ultrasound
 - c. Electron beam CT
 - d. Fusion imaging
 - e. TIPS

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD RADIODIAGNOSIS
(PAPER ONE)**

BASIC SCIENCES RELATED TO RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required

- Q. 1.** Define and classify contrast media. Describe all the advantages of newer generation contrast media and their disadvantages. (20)
- Q. 2.** Describe with neat diagram the CR and DR. Discuss their advantages and disadvantages. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Elastography
 - b. MR angio and CT angio
 - c. Principles of color Doppler and power Doppler
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. Relationship between KVP and MAS
 - b. ALARA principle
 - c. Radiographic filters
 - d. PC and PNDT act
 - e. TLD badge

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD RADIODIAGNOSIS
(PAPER TWO)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required.

- Q. 1.** Draw diagram of mediastinum. How will you investigate a case of patient whose chest X-ray is showing SOL in left hilar region? (20)
- Q. 2.** Enumerate causes of dysphagia. Discuss role of imaging in patient having dysphagia. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Radio-imaging findings in hyperparathyroidism
 - b. MRCP
 - c. Role of ultrasonography on blunt trauma of abdomen
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. X-ray and imaging findings in diaphragmatic hernia
 - b. Pneumothorax
 - c. Aortic dissection
 - d. Pheochromocytoma
 - e. Annular pancreas

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD RADIODIAGNOSIS
(PAPER THREE)**

CLINICAL RADIOLOGY & RELATED PATHOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required.

- Q. 1.** In imaging of acute stroke, describe: (a) Role of MDCT and (b) Basic MR sequences, diffusion-perfusion mismatch & role of thrombolytic therapy. (20)
- Q. 2.** Classify orbital tumors. Describe imaging features of tumors involving the eyeball. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Perthe's disease – imaging features
 - b. Neuro sonography in newborn infant
 - c. Radiology in the management of osteosarcoma
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. Intracranial calcifications
 - b. Mesial temporal sclerosis
 - c. Glomus tympanum tumors
 - d. Carotid-cavernous fistula
 - e. Odontogenic tumor of mandible

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD RADIODIAGNOSIS
(PAPER FOUR)**

RECENT ADVANCES AND NUCLEAR MEDICINE IN RADIODIAGNOSIS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required.

Q. 1. Enumerate the techniques in functional MRI. Discuss clinical applications of MR tractography. **(20)**

Q. 2. Mention TNM classification of colo-rectal carcinoma. Discuss role of PET CT in its diagnosis and management. Discuss role of chemoembolisation in metastasis of colonic carcinoma. **(20)**

Q. 3. Describe briefly: **(3 x 10 = 30)**

- a. Scintigraphic evaluation of GI bleeding
- b. Principles and clinical applications of bold imaging
- c. Doppler evaluation of acute scrotal lesions

Q. 4. Write short notes on: **(5 x 6 = 30)**

- a. CT perfusion study
- b. Virtual endoscopy
- c. Calcium scoring
- d. Nuclear medicine findings in bone lesions
- e. Tomosynthesis and its clinical applications

X