

April-2001

[KD 146]

Sub. Code : 2084

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VIII — Radio Diagnosis

Part II — Final

Paper III — RADIO DIAGNOSIS INCLUDING
INTERVENTIONAL PROCEDURES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. What is rectification? Discuss the solid state rectifiers and its advantages over conventional vacuum rectifiers.

How do you test the working of rectifier system?

(25)

2. Describe the development of GIT. Write in short the radiological appearances in Malrotation of the gut.

(25)

3. Short notes on :

(5 × 10 = 50)

(a) Film badge

(b) Iohexol

(c) Transducers

(d) Radiological anatomy of the sella

(e) Sialography.

March-2002

[KG 146]

Sub. Code : 2044

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VIII — Radiodiagnosis

Part II — Final

Paper III — RADIODIAGNOSIS INCLUDING
INTERVENTIONAL PROCEDURES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the role of imaging in Abdominal Trauma.
(25)
 2. Describe the various "Image guided" procedures commonly performed.
(25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) High resolution CT.
 - (b) Stress fracture.
 - (c) Portal hypertension.
 - (d) Solitary pulmonary nodule.
 - (e) CNS anomalies in the fetus.
-

April-2003

[KI 146]

Sub. Code : 2043

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VIII — Radiodiagnosis

Part II — Final

Paper III — RADIODIAGNOSIS INCLUDING
INTERVENTIONAL PROCEDURES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the role of radiology in diagnosis and management of pancreatitis? (25)
 2. Discuss the current status of vascular interventional techniques. (25)
 3. Write short notes on (5 × 10 = 50)
 - (a) Imaging of pituitary adenoma
 - (b) CT and MRI in intervertebral disc prolapse
 - (c) Sequestration (lung)
 - (d) Intraventricular neoplasms in children
 - (e) Digital radiography.
-

[KJ 146]

Sub. Code : 2044

M.D. DEGREE EXAMINATION.

(New/Revised Regulations)

Branch VIII — Radiodiagnosis

Part II — Final

Paper III — RADIODIAGNOSIS INCLUDING
INTERVENTIONAL PROCEDURES

Time : Three hours	Maximum : 100 marks
Theory : Two hours and Forty minutes	Theory : 80 marks
M.C.Q. : Twenty minutes	M.C.Q. : 20 marks

M.C.Q. must be answered **SEPARATELY** on the answer sheet provided as per the instructions on the first page.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

Essay questions : (2 × 15 = 30)

1. Role of interventional radiology in the evaluation of intra cranial AV Malformations.
2. Role of interventional radiology in gastrointestinal bleeding.

3. Short notes : (10 × 5 = 50)

1. Transhepatic biliary drainage – procedure and indications.
2. Spin – echo technique in MR imaging.
3. Stereotaxis in Mammography.
4. Evaluation of pseudo-pancreatic cysts by ultrasound.
5. Ring lesions in the brain – evaluation by C.T.
6. Congenital dislocation of the hip joint – radiological evaluation.
7. Spleno – portogram – procedure and indications.
8. Differential diagnosis of cystic lung disease.
9. Role of echocardiography in congenital heart disease.
10. Write about positron emission tomography.

KM 146]**Sub. Code : 2044**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VIII — Radiodiagnosis

Part II — Final

Paper III — RADIODIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions :

(2 × 15 = 30)

(1) Classify and discuss ADRENAL MASSES.

Discuss the imaging investigations of the past and present and add notes on the salient findings noted on the various imaging investigations.

(2) Discuss the currently used Angiography methods in Neuro Radiology and elaborate on present day interventional neuroradiology. Describe the congenital anomalies of the "circle of willis".

II. Short notes :

(10 × 5 = 50)

(a) Portable chest radiography techniques and teleradiology

(b) **Extraluminal air, diagnosis and significance**

(c) Scrotal ultrasound

(d) **Positron emission tomography imaging of the thorax**

(e) Technical aspects of helical C.T.

(f) **MR imaging of the meniscus of the knee**

(g) Catheter based angiography its present and future applications

(h) Post menopausal bleeding value of imaging

(i) Radiological evaluation of inflammatory myopathies

(j) Paediatric upper gastro-intestinal tract evaluations

[KO 146]

Sub. Code : 2043

M.D. DEGREE EXAMINATION.

Branch VIII — Radiodiagnosis

RADIOLOGICAL DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES AND RECENT ADVANCES

Time : Three hours **Maximum : 100 marks**

Theory : Two hours and forty minutes	Theory : 80 marks
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M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions : (2 × 15 = 30)

(1) What are the causes of unilateral proptosis. Discuss radiological diagnosis and management carotico-cavernous fistula.

(2) Classify mucopolysaccharidosis. Describe radiological features of MPS IV.

II. Short notes : (10 × 5 = 50)

(a) Contrast Enhanced Magnetic Resonance Angiography (CEMRA).

(b) CT guided biopsy of lung mass.

(c) **Pneumo mediastinum.**

(d) I.V.C. filter placement.

(e) Doppler evaluation of deep vein thrombosis of leg.

(f) Pyogenic meningitis in a child-imaging features.

(g) Urothelial malignancy.

(h) **Functional MRI of brain.**

(i) **Inverted pappilloma.**

(j) **Leforte fractures.**

[KQ 136]

Sub. Code : 2044

M.D. DEGREE EXAMINATION.

Branch VIII — Radio Diagnosis

**Paper IV (For candidates admitted from 2004-2005
onwards)**

**RADIO DIAGNOSIS INCLUDING INTERVENTIONAL
PROCEDURES AND RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary

I. Essay Questions :

1. Write about image production in Magnetic resonance, mention briefly about 2D & 3D pictures & contrast used in MRI. (20)

2. M.R. Spectroscopy in the evaluation of Pediatric Cancers. (15)

3. Write about Dental CT – Techniques, Applications and Advantages. (15)

II. Short notes :

(6 × 5 = 30)

(a) M.R. Urography

(b) PACS in managing digital images

(c) Spleno - portogram - procedure & indications

(d) Transcranial Doppler

(e) Hypotonic Duodenography – Procedure and Indications

(f) Imaging of para thyroid gland

MARCH 2008

[KS 139]

Sub. Code : 2034

M.D. DEGREE EXAMINATION.

Branch VIII — Radio Diagnosis

(Common to all Regulations)

Paper IV — RADIO DIAGNOSIS INCLUDING INTERVENTIONAL
PROCEDURES AND RECENT ADVANCES

Q.P. Code : 202034

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : (2 × 20 = 40)

1. Write about interventional procedures of the kidney and its blood vessels.
2. Discuss the differential diagnosis and radiological features of pulsating exophthalmos. Briefly discuss the role of interventional radiology in pulsating exophthalmos.

II. Short notes : (10 × 6 = 60)

1. SPECT.
 2. Artifacts in Cardiac CT.
 3. Role of penile colour doppler in the evaluation of erectile Dysfunction.
 4. Isotope scanning in liver disorder.
 5. Role of CT in cerebral bleeds.
 6. Mammography.
 7. Role of MRI in demyelinating disease.
 8. Barium swallow.
 9. Neurocysticercosis.
 10. Base of the Skull.
-

March 2009

[KU 139]

Sub. Code: 2034

M.D. DEGREE EXAMINATION

**Branch VIII – RADIO DIAGNOSIS
(Candidates admitted from 2007-2008)**

**Paper IV – RADIO DIAGNOSIS INCLUDING
INTERVENTIONAL PROCEDURES AND RECENT ADVANCES**

Q.P. Code : 202034

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 x 20 = 40)

1. Discuss the procedure and role of magnetic resonance shoulder arthrography in Gleno –Humeral instability.
2. Discuss the differential diagnosis and radiological features of collapsed vertebra. Briefly discuss the role of interventional radiology in collapsed vertebra.

II. Write short notes on : (10 x 6 = 60)

1. Transjugular liver biopsy.
2. Clinical applications of diffusion weighted magnetic resonance imaging.
3. Femoro – Acetabular impingement.
4. Role of interventional radiology in male infertility.
5. Magnetic resonance imaging findings in extra – axial mass lesions.
6. Vascular ultrasound.
7. Artefacts in cardiac computer tomography.
8. Hepato-biliary scintigraphy.
9. Magnetic resonance cholangio pancreatography (MRCP).
10. Cardiac computer tomography angiogram.

March 2010

[KW 139]

Sub. Code: 2034

M.D. DEGREE EXAMINATION

Branch VIII – RADIO DIAGNOSIS

**Paper IV – (for candidates admitted upto 2007-2008) and
Part II / Paper III – (for candidates admitted from 2008-2009 onwards)**

**RADIO DIAGNOSIS INCLUDING INTERVENTIONAL
PROCEDURES AND RECENT ADVANCES**

Q.P. Code : 202034

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 x 20 = 40)

1. Classify bone tumors and discuss in detail about tumors of cartilage origin.
2. Discuss the methods of radiation protection. How do you protect the occasional exposed and occupationally exposed.

II. Write short notes on : (10 x 6 = 60)

1. Retrocaval ureter.
2. Medullary sponge kidney / page kidney.
3. M.R. Angiography.
4. Intra operative ultrasound.
5. C.T. pneumosialography.
6. Broncho-pulmonary segments and hypoplasia / aplasia of lung.
7. H.R.C.T. in Sweyer – James syndrome.
8. Renal scintigraphy.
9. Small kidney.
10. VACTEREL anomaly.

MAY 2011

[KY 139]

Sub. Code: 2034

M.D. DEGREE EXAMINATION
BRANCH VIII – RADIO DIAGNOSIS
RADIO DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES
AND RECENT ADVANCES

Q.P. Code : 202034

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. What are the differentials for a patient presenting with fever, altered sensorium and seizures. Discuss the imaging findings in Herpes Encephalitis.	11	35	15
2. Describe the boundaries and contents of the Carotid Space. List the differentials for a mass in the carotid space. Discuss the role of intervention radiology in the diagnosis and management.	11	35	15

II. Write notes on :

1. Direct digital radiography.	4	10	7
2. Ring enhancing lesions in the brain.	4	10	7
3. Arterial supply to the liver and normal variants.	4	10	7
4. Acroosteolysis.	4	10	7
5. Spinal ultrasound.	4	10	7
6. Hydrocephalus.	4	10	7
7. Radiofrequency ablation.	4	10	7
8. 'Spoiled' Gradient Echo sequences.	4	10	7
9. MRI shoulder arthrogram.	4	10	7
10. Cytotoxic edema.	4	10	7

APRIL 2012

[LA 139]

Sub. Code: 2034

**M.D. DEGREE EXAMINATION
BRANCH VIII – RADIO DIAGNOSIS
RADIO DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES AND
RECENT ADVANCES
Q.P. Code : 202034**

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Discuss the vascular interventional procedures.	16	35	15
2. Write the causes of Gastrointestinal bleeding. Role of Interventional radiology in Gastrointestinal bleeding.	16	35	15

II. Write notes on :

1. Explain the procedure of percutaneous transhepatic biliary drainage.	4	10	7
2. Give an account on IVC filters.	4	10	7
3. Write a note on CT perfusion imaging and its role in stroke management.	4	10	7
4. Imaging findings of Retinoblastoma.	4	10	7
5. Write notes on Picture Archiving and Communication System (PACS).	4	10	7
6. Explain the techniques, limitations and uses of Magnetic Resonance Cholangio Pancreatography.	4	10	7
7. Intraoperative ultrasound – Role in Management of Pancreatic lesions.	4	10	7
8. Cardiomyopathies – Give the role of MRI in diagnosis.	4	10	7
9. Solitary collapse vertebra - differential diagnosis and salient features of each.	4	10	7
10. Give an account on “Prenatal Diagnostic Techniques” Act.	4	10	7

(LC 139)

**APRIL 2013
M.D. DEGREE EXAMINATION**

Sub. Code: 2034

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.

[LD 139]

OCTOBER 2013

Sub. Code: 2034

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

RADIO DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES

AND RECENT ADVANCES

Q.P.Code: 2020334

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2 x 15 = 30)

1. Role of interventional radiology in intracranial aneurysms.
2. Role of MDCT in evaluation of congenital heart diseases.

II. Write notes on:

(10 x 7 = 70)

1. CT guided Lung biopsy.
2. PNLT Act – Explain.
3. Describe Ultrasound contrast media.
4. Role of Diffusion weighted imaging in CNS lesions.
5. Intraoperative ultrasound.
6. Describe technique of PCN (Percutaneous nephrostomy).
7. Imaging findings of hepatic hemangioma.
8. Write a note on PACS (Picture Archiving and communication system)
9. Radiological and Imaging findings of Intussusception.
10. Role of ultrasound in Antepartum hemorrhage.

[LE 139]

APRIL 2014

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. How will you proceed to investigate a patient presenting with acute stroke.
2. Elaborate in detail the Clinical features diagnosis and Imaging appearances in Ischaemic Heart Disease.

II. Write notes on:

(10X7=70)

1. Duplex Ultrasonography of Erectile Dysfunction.
2. Imaging findings in Acoustic Neuroma.
3. Role of Imaging in Orbital Trauma.
4. Classification and Imaging findings in Nasal and Paranasal Sinus Tumors.
5. Embryology of the brain and disorders of dorsal induction.
6. Imaging findings in Scimitar Syndrome.
7. Imaging features of Neoplasms of the Parotid Gland.
8. Imaging findings in Crohn's disease.
9. Radiological features in Ankylosing Spondylitis.
10. Imaging features of Paraganglioma.

[LF 139]

OCTOBER 2014

Sub. Code: 2034

**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:

(2 x 15 = 30)

1. Discuss about gynaecological interventions in radiology and its clinical applications.
2. Briefly write about the embryology of heart. Discuss the radiology of cyanotic congenital heart disease.

II. Write notes on:

(10 x 7 = 70)

1. Percutaneous cholecystostomy.
2. Imaging features of Sturge Weber syndrome.
3. Radiological features of silicosis.
4. Write about vascular ultrasound.
5. Colonic polyp Vs diverticulae in barium study.
6. Imaging features of coarctation of aorta.
7. Techniques and clinical applications of MR urography.
8. Write about technique and clinical applications of sleep MRI.
9. Role of Radiology in congenital anomalies of renal pelvis and ureter.
10. Imaging of Pleural masses.

[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

I. Elaborate on:

(2 x 15 = 30)

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.

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

I. Elaborate on:

(2 x 15 = 30)

1. Imaging evaluation of a 50 year old patient presented with 3 hours history of aphasia and right hemiparesis. Add a note on role of endovascular interventions in such patients.
2. Role of MRI and CT in Cardiac imaging.

II. Write notes on:

(10 x 7 = 70)

1. Precautions during radiological procedures in HIV positive patients.
2. Imaging in non-traumatic subarachnoid hemorrhage.
3. Vertebroplasty and its application.
4. Multisystem Diseases with pancreatic involvement.
5. Importance of Medicolegal issues in Diagnostic Radiology.
6. Trans arterial chemoembolisation (TACE) of liver.
7. Ultrasound in focal breast lesion.
8. PET-MRI.
9. Segmental anatomy of liver and its importance.
10. Image guided radiofrequency ablation.

[LI 139]

APRIL 2016

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Discuss about arteriovenous malformations of brain and write in detail the radiological interventions useful in their management.
2. Discuss the basic HRCT patterns in lung and write in detail the imaging findings of interstitial lung diseases.

II. Write notes on:

(10 x 7 = 70)

1. Radiographic CVJ lines.
2. Ultrasound evaluation of a child with hydronephrosis.
3. Time intensity curve in soft tissue tumors imaging.
4. Technical descriptions on MR Angiography.
5. Intramedullary spinal cord tumors.
6. Imaging features of inflammatory bowel diseases.
7. Radiology of acute kidney infections.
8. Skeletal manifestations of neurofibromatosis type I.
9. Sonographic evaluation of developmental dysplasia of hip.
10. Techniques for CT guided interventions in Retroperitoneal tumor diagnosis.

[LJ 139]

OCTOBER 2016

Sub. Code: 2034

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:

(2 x 15 = 30)

1. What are the various MRI sequences used in imaging the female pelvis including Perineal floor? Describe the multimodality approach towards characterizing a complex adnexal mass and uterine artery embolisation.
2. Describe the mediastinal compartments and the imaging approach towards diagnosis and characterisation of a mediastinal mass. Write a note on CT-guided biopsy of anterior mediastinal mass.

II. Write notes on:

(10 x 7 = 70)

1. Technique of percutaneous nephrostomy.
2. Radiological differences between cardiac and non-cardiac pulmonary edema.
3. Imaging features of epiploic appendicitis.
4. Imaging of intraventricular brain tumors.
5. Bronchial artery embolisation.
6. Imaging evaluation and differential diagnosis of presacral mass in a child.
7. Magnetic Resonance cholangio-pancreatography (MRCP).
8. Architecture of PACS (Picture archiving and communication system).
9. Patello femoral mal-alignment – Imaging assessment.
10. CT guided neurolysis in pain management.

[LK 139]

MAY 2017

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Interventional Radiology in Liver tumors.
2. Fetal interventions.

II. Write notes on:

(10 x 7 = 70)

1. Contrast enhanced digital mammography.
2. Radiofrequency ablation.
3. Vertebroplasty.
4. Imaging in post liver transplant.
5. BRTO (Balloon occluded retrograde transvenous obliteration of varices).
6. Vascular embolisation techniques.
7. Transjugular liver biopsy.
8. Cardiac CT.
9. MR enteroclysis.
10. Celiac plexus neurolysis.

[LL 139]

OCTOBER 2017

Sub. Code: 2034

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:

(2 x 15 = 30)

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:

(10 x 7 = 70)

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.

[LM 139]

MAY 2018

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Imaging and intervention of acute ischemic stroke.
2. Imaging of Budd – Chiari syndrome and role of interventional radiology.

II. Write notes on:

(10 x 7 = 70)

1. Imaging of carotid cavernous fistula and interventional management.
2. CT guided biopsy technique.
3. Portal vein embolisation.
4. Imaging of osteoid osteoma and interventional management.
5. Radiomics.
6. Fibroid embolisation.
7. Imaging of bowel ischemia.
8. Diffusion weighted imaging in brain tumors.
9. Spectral CT.
10. Chemo port.

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:

(2 x 15 = 30)

1. Describe the principle and instrumentation of PET scanning? Add a note on clinical application and mention two non-FDG molecules of PET scanning.
2. Enumerate the causes of ring enhancing lesions of brain parenchyma in MRI. Discuss the role of DWI and MR spectroscopy in differentiation of various lesions.

II. Write notes on:

(10 x 7 = 70)

1. Oncologic Applications of Dual-Energy CT in the Abdomen.
2. Digital Tomosynthesis of the breast.
3. Role of ultrasound in evaluation of peripheral nerves.
4. Classification and Endovascular management of intra-cranial dural arteriovenous fistulae.
5. Evaluation of uterine cervical incompetence.
6. PC-PNDT Act.
7. Imaging of Congenital anomalies of the uterus.
8. Pressure injectors in radiology interventions.
9. Image guided radiofrequency ablation.
10. Ultrasound Elastography in Breast lesions.

[LO 139]

MAY 2019

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Imaging evaluation of hepatic nodules and Interventional management of hepatocellular carcinoma.
2. Role of imaging in hemoptysis with a note on indications, technique and complications of bronchial artery embolization.

II. Write notes on:

(10 x 7 = 70)

1. Tissue harmonic imaging – principles and applications.
2. Ultrasound contrast agents.
3. MR imaging in prostatic carcinoma.
4. MR cholangiogram – technique and applications.
5. Hysterosalpingogram.
6. Whole body diffusion weighted imaging.
7. Chemical shift imaging.
8. CT colonography – technique and applications.
9. Computer aided detection in mammography.
10. Targeted imaging for foetal anomaly.

[LP 139]

OCTOBER 2019

Sub. Code: 2034

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:

(2 x 15 = 30)

1. List the differential diagnosis in an adult male presenting with hematemesis. Mention the indications, technique and complications of Transjugular Intrahepatic Portosystemic Shunt (TIPS).
2. Discuss the causes of neonatal encephalopathy and role of MRI.

II. Write notes on:

(10 x 7 = 70)

1. Percutaneous nephrostomy; indications, technique.
2. Evaluation of thyroid nodules.
3. Nuchal fold thickness.
4. Cardiac MRI: indications, advantages over other modalities.
5. Radiofrequency ablation of non-liver lesions.
6. Role of intervention in post partum hemorrhage.
7. MRI flow voids in the spinal canal.
8. Focussed ultrasound therapy for Uterine fibroids.
9. Artificial intelligence in radiology.
10. Fast imaging techniques in MRI.

[LQ 139]

**AUGUST 2020
(MAY 2020 SESSION)**

Sub. Code: 2034

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:

(2 x 15 = 30)

1. How do you evaluate a pregnant lady with an IUGR baby ? Role of USG and Doppler during the course of her pregnancy.
2. Role of radiology in relieving pain in an ischemic lower limb .

II. Write notes on:

(10 x 7 = 70)

1. MR ABRE Tractography
2. Preprocedural work up in a person admitted for a planned DSA procedure
3. Role of MRI in a pregnant female
4. Pelvic floor imaging
5. Explain the procedure of vertebral body biopsy
6. Radiological evaluation in a person with obstructive jaundice
7. Endovascular USG
8. Imaging in a case of normal pressure hydrocephalous
9. Role of perfusion MRI in ischemic stroke
10. Evaluation of a newborn child with blindness

[LS 139]

**NOVEMBER 2020
(OCTOBER 2020 SESSION)**

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Elaborate in detail the causes of gastrointestinal bleeding and role of radiology in diagnosis and treatment .
2. Principle of PET CT. Role of PET in oncoimaging.

II. Write notes on:

(10 x 7 = 70)

1. BOLD imaging – its uses and limitations
2. Elastography, role in liver diseases
3. Application of diffusion imaging in abdominal MRI
4. Functional MRI in brain
5. Explain the procedure of pig tail drainage and its applications
6. MR Radiofrequency coils
7. Radiological intervention in a case of liver hydatid
8. CT perfusion and its applications
9. Intraoperative Ultrasonography
10. Neonatal Hip sonography

[MD 0721]

**JULY 2021
(MAY 2021 SESSION)**

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Cleaning and disinfection of all radiology equipments in the radiology department.
How to prepare for a pandemic?
2. Imaging evaluation of hepatic nodules and interventional management of
hepatocellular carcinoma imaging in post liver transplant.

II. Write notes on:

(10 x 7 = 70)

1. AI in head injury.
2. Sonosalpingogram.
3. Leucodystrophy with contrast enhancement.
4. Contrast mammography.
5. MRI in muscular dystrophy.
6. Intervention in portal hypertension.
7. MR urology.
8. MR evaluation of placental abnormalities.
9. Recent advances to detect early osteo arthritis by imaging.
10. RECIST.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MD 1121]

**NOVEMBER 2021
(OCTOBER 2021 SESSION)**

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Molecular imaging.
2. Imaging of puj obstruction and role of imaging in management.

II. Write notes on:

(10 x 7 = 70)

1. Machine learning.
2. 3D printing.
3. Inflammatory and auto immune disorder of spinal cord lesion.
4. CT and MR cisternergraphy.
5. CNS manifestations in COVID – 19.
6. Virtual Bronchoscopy.
7. Multifocal skull base lesions.
8. Imaging in cardiomyopathies.
9. LIRADS.
10. MR Hystero salphingo graphy.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 0522]

MAY 2022

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Discuss role of interventional radiology in Head and Neck pathologies.
2. Discuss about imaging of cystic pancreatic masses in detail.

II. Write notes on:

(10 x 7 = 70)

1. Breast anatomy and variants.
2. 3D and 4D obstetric USG.
3. Types of MR Cartilage imaging
4. MR Sialogram.
5. High Frequency USG of fingers in inflammatory arthritis.
6. Carotid plaque classification and role of imaging.
7. Interventions for pain management in Oncology.
8. MRI in Stroke Mimics.
9. IgG4 related disease.
10. Variants in pediatric radiography mimicking pathology.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 0723]

**JULY 2023
(MAY 2023 EXAM SESSION)**

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Imaging of various Arterio Venous communications in the parenchymal and meningeal coverings of the brain with special references to Dural AV Fistula and intervention in cerebral aneurysm.
2. Approach to adrenal tumours with Special note on CT PET imaging.

II. Write notes on:

(10 x 7 = 70)

1. PTBD in obstructive Jaundice.
2. Imaging of brown tumours.
3. Transjugular Intrahepatic Portosystemic Shunt.
4. AMBER Technique in Chest X-rays.
5. Septal bounce in Cardiac MRI.
6. Intra amniotic Transfusions.
7. High frequency USG of Chest.
8. Uterine artery Embolisation.
9. Tram track sign.
10. Imaging of Acute Lower Abdominal pain in female of reproductive age with special emphasis on Ectopic pregnancy.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 1223]

**DECEMBER 2023
(OCTOBER 2023 EXAM SESSION)**

Sub. Code: 2034

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:

(2 x 15 = 30)

1. Trauma and emergency imaging with special note in Sub Arachnoid Hemorrhage.
2. Multiple nodules in Liver. Imaging with special note to hepatic transplant imaging.

II. Write notes on:

(10 x 7 = 70)

1. Advanced USG techniques in breast and liver.
2. Arrhythmogenic Right Ventricular Dysplasia imaging in cardiac MRI.
3. MRI CSF Flow study.
4. Time Intensity Curve in MRI breast.
5. Juvenile epistaxis evaluation and intervention.
6. CT and MRI sequences in Cisternogram.
7. Puncture, Aspiration, Injection and Respiration technique.
8. Xanthogranulomatous pyelonephritis.
9. PCN with Antegrade DJ stenting.
10. RFA in solid tumours of various organs.
