

April 2012

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO DIAGNOSIS

Answer ALL questions in the same order.

I. Elaborate on :

1. Describe the Physical Principles of MDCT.
2. Discuss the various factors that affect the radiographic image.

II. Write notes on :

1. What are the types of Rectifiers? Describe its function.
2. Give a note on Compton effect.
3. Describe the functioning of Gamma Camera.
4. Give an account on Modern Laser Dry Imagers.
5. What do you mean by ALARA Principle
(As Low as Reasonably Achievable).
6. Discuss in detail Stochastic effects of Radiation.
7. Describe the principle of Magnetic Resonance Angiography.
8. Write notes on Ultrasound transducer.
9. What are the common MRI artifacts? Discuss about Magic angle phenomenon.
10. Compare stationary and Rotating Anode, give the advantages of the latter.

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M.D. DEGREE EXAMINATION BRANCH VIII –
RADIO DIAGNOSIS RADIO DIAGNOSIS INCLUDING
NUCLEAR MEDICINE

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

1. Write the principles of MDCT and the various reconstruction methods.
2. Write in detail the imaging & radiological features of Rheumatoid arthritis.

II. Write notes on :

1. Role of Meta Iodo Benzyl Guanidine Scintigraphy in diagnosis of adrenal lesions.
2. Role of investigation in management of Choriocarcinoma.
3. Pneumocystis Carinii Pneumonia – radiological and CT findings.
4. Metaphyseal dysplasia – classify and write their radiological findings.
5. Describe the types of aneurysm emphasizing on Thoracic aortic aneurysm.
6. Tetralogy of Fallot – Describe the radiological and imaging findings.
7. Classify Testicular tumors, and describe the imaging features of nongerm cell tumors incorporating serology.
8. Give a note on common congenital coronary anomalies.
9. Hydatid Cyst – Imaging findings in various locations.
10. Write down the radiological and imaging findings of Chondrosarcoma.

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M.D. DEGREE EXAMINATION RADIO DIAGNOSIS
INCLUDING INSTRUMENTATION AND CONTRAST STUDIES

Answer ALL questions in the same order.

I. Elaborate on :

1. Discuss the role of HRCT in diffuse interstitial lung disease.
2. Enumerate causes of bleeding per rectum in adult male. Describe the procedure and interpretation of double contrast barium enema in Inflammatory bowel disease.

II. Write notes on :

1. Hirschsprung disease – Barium enema findings.
2. Enumerate ultrasound contrast media and its role in diagnosis of focal liver lesions.
3. Describe procedure of T.Tube cholangiogram and its clinical application.
4. Vesicoureteric Reflux – Radiological findings and its clinical Significance.
5. Describe the physics of 3D ultrasound.
6. Explain with a neat sketch the technique of Axial patella.
7. Biophysical profile - Tabulate and give its significance.
8. Write about the Barium meal findings in Malrotation & Non rotation.
9. Necrotising Enterocolitis – Imaging Diagnosis.
10. Enteroclysis – describe the procedure and its application.

APRIL 2012
M.D. DEGREE EXAMINATION
RADIO DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES AND
RECENT ADVANCES

I. Elaborate on :

1. Discuss the vascular interventional procedures.
2. Write the causes of Gastrointestinal bleeding. Role of Interventional radiology in Gastrointestinal bleeding.

II. Write notes on :

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