OCTOBER 2018

M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

PAPER I – MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO DIAGNOSIS

I. Elaborate on: **(2 x 15 = 30)**

1.Discuss the principles and physics of ultrasound and Doppler imaging.

2 .Planning radiology department for a 750 bedded multi-specialty hospital.

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

1.Dark room plan for wet processing of X-ray films.

2.Spin echo sequence.

3.X-ray films – Types and characteristics.

4.The ways to minimize radiation for children during radiographic investigations.

5.Safety precautions during MRI.

6.Spiral CT.

7.Discuss the artefacts in MR imaging.

8.Rotating anode X-ray tube.

9.Photoelectric effect.

10.PACS in a Radiology Dept.

OCTOBER 2018

BRANCH VIII – RADIO DIAGNOSIS

PAPER II – RADIO DIAGNOSIS INCLUDING NUCLEAR MEDICINE

I. Elaborate on: (2 x 15 = 30)

1.Discuss about technetium 99m isotope in imaging. Write about its various clinical applications.

2.Explain migration disorders based on congenital malformations of brain and discuss the role of imaging in diagnosing them.

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

1. Radioisotopes of iodine and thyroid imaging.
2. Imaging of Hepatic masses in children.
3. True lumen Vs false lumen in aortic dissection and its angiographic findings.
4. Radiographic evaluation of ureterocele.
5. Role of nuclear medicine in myocardial illness evaluation.
6. HRCT findings in sarcoidosis.
7. Imaging features of Budd chiari syndrome.
8. Primary Vs secondary hyperparathyroidism with imaging findings.
9. Imaging of idiopathic hypertrophic pyloric stenosis.
10. List mullerian anomalies and their imaging findings.

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BRANCH VIII – RADIO DIAGNOSIS

PAPER III – RADIO DIAGNOSIS INCLUDING INSTRUMENTATION AND CONTRAST STUDIES

I. Elaborate on: (2 x 15 = 30)

1.Describe the radiological anatomy of mediastinum. Write about posterior mediastinal lesions.

2.Brief the various breast imaging modalities and write in detail about the role of MR mammography in diagnosis of different breast lesions.

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

1.Sclerosing skeletal dysplasia.

2.Posterior fossa cystic lesions.

3.The procedure and its clinical implications of double contrast barium enema.

4.Techniques for image guided vertebral biopsy.

5.Doppler evaluation of IUGR.

6.Imaging features of juvenile idiopathic arthritis.

7.Embryology of pancreas and its congenital anomalies.

8.Techniques of routine contrast C.T. of abdomen in adult and children.

9.Radiology of Juxtacortical osteosarcomas.

10.Imaging of anorectal malformations.

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M.D. DEGREE EXAMINATION

BRANCH VIII – RADIO DIAGNOSIS

PAPER IV – RADIO DIAGNOSIS INCLUDING INTERVENTIONAL PROCEDURES AND RECENT ADVANCES

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 lessons 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 lesio