

MAY 2011

[KY 136]

Sub. Code:

M.D. DEGREE EXAMINATION

MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO DIAGNOSIS

I. Elaborate on : Pages Time Marks

(Max.) (Max.) (Max.)

1. Describe the X-ray tube and function of each part with help of a diagram. What are the various types and recent advances in X-ray tubes?

2. Explain the various steps involved in X-ray film processing. Discuss the formation of latent image, its development and fixation.

II. Write notes on :

1. MR Angiography.
2. Attenuation Correction.
3. Filters.
4. Automatic Brightness Control.
5. Multidetector CT.
6. Scatter radiation.
7. CR vs DR.
8. Maximum permissible dose.
9. Ultrasound artifacts.
10. Harmonic imaging.

2033

[KY 137]

Sub. Code:

M.D. DEGREE EXAMINATION BRANCH VIII – RADIO

**DIAGNOSIS RADIO DIAGNOSIS INCLUDING
NUCLEAR MEDICINE**

I. Elaborate on : Pages Time Marks

(Max.) (Max.) (Max.)

1. A child aged three years presents with a palpable flank mass. Discuss the imaging algorithm with justification. List the differentials and describe the imaging findings of Wilm's Tumour.

2. Enumerate the differentials for back pain in a male aged 25 years. What is the role of MRI in the evaluation? Describe the imaging findings in infective spondylitis.

II. Write notes on :

1. Hepatic hemangioma.
2. IDA scan.
3. Sesta MIBI scan.
4. Craniovertebral junction – normal radiographic measurements.
5. Pterygopalatine fossa.
6. Metadiaphyseal lucent lesion.
7. Platyspondyly.
8. Microcalcification on mammogram.
9. Painful scrotal swelling.
10. Pancreas divisum.

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[KY 138]

Sub. Code:

**M.D. DEGREE EXAMINATION
BRANCH VIII – RADIO DIAGNOSIS
RADIO DIAGNOSIS INCLUDING INSTRUMENTATION
AND CONTRAST STUDIES**

Q.P. Code : 202033

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

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on : Pages Time Marks

(Max.) (Max.) (Max.)

1. What are the differentials for a male aged 55 years presenting with hemoptysis. Discuss plain radiograph and CT findings in the evaluation of Bronchogenic carcinoma.
2. What is the schedule for antenatal ultrasound scans? Discuss the significance of scans done in the first trimester.

II. Write notes on :

1. HRCT in sarcoidosis.
2. Bilateral inferior rib notching.
3. Pulmonary venous hypertension.
4. Crohn's v/s TB.
5. Small bowel enema.
6. Neonate not having passed meconium.
7. Image guided treatment of pelvic abscess.
8. MRI in female infertility.
9. Contrast enhanced ultrasound.
10. GIST.

[KY 139]

Sub. Code:

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

Answer ALL questions in the same order.

I. Elaborate on : Pages Time Marks

(Max.) (Max.) (Max.)

1. What are the differentials for a patient presenting with fever, altered sensorium and seizures. Discuss

the imaging findings in Herpes Encephalitis.

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.

II. Write notes on :

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