

APRIL 2011

[KY 1514]

Sub. Code: 3019

**DIPLOMA IN MEDICAL RADIODIAGNOSIS (DMRD)
EXAMINATION**

**MEDICAL RADIATION PHYSICS AS APPLIED TO
RADIODIAGNOSIS**

Q.P. Code : 343019

**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. Describe the Gamma Camera in detail. | 11 | 35 | 15 |
| 2. Explain the principles of magnetic resonance imaging. Explain T1 and T2 relaxations and describe the pulse sequences commonly used in imaging. | 11 | 35 | 15 |

II. Write notes on :

- | | | | |
|-----------------------------------|---|----|---|
| 1. Ultrasound transducers. | 4 | 10 | 7 |
| 2. High KV technique. | 4 | 10 | 7 |
| 3. Physics of Doppler ultrasound. | 4 | 10 | 7 |
| 4. X-ray film processing. | 4 | 10 | 7 |
| 5. Superconducting magnet in MRI. | 4 | 10 | 7 |
| 6. Virtual colonoscopy. | 4 | 10 | 7 |
| 7. PET. | 4 | 10 | 7 |

8. MR coils. 4 10 7

9. PACS. 4 10 7

10. Beam hardening effect. 4 10 7

APRIL 2011

[KY 1515]

Sub. Code: 3020

**DIPLOMA IN MEDICAL RADIODIAGNOSIS (DMRD)
EXAMINATION**

RADIODIAGNOSIS AND IMAGING

Q.P. Code : 343020

**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. Differential diagnosis of rounded opacity in lung field and role of CT in its diagnosis.	11	35	15
2. Discuss the various imaging modalities and their findings in renal tumours.	11	35	15

II. Write notes on :

1. Intra operative ultrasound.	4	10	7
2. MR sequences in the evaluation of focal liver disease.	4	10	7
3. Role of interventional radiology in upper GI bleed.	4	10	7
4. Radiology in appendicitis.	4	10	7
5. Hemangioma of skull vault.	4	10	7
6. Spinal TB.	4	10	7
7. Neuro sonography.	4	10	7
8. Plain X-ray and echo finding in mitral stenosis.	4	10	7
9. Polypoid lesions of colon.	4	10	7

10. Radiology in Adult Respiratory Distress

Syndrome (ARDS).

4 10 7

APRIL 2011

[KY 1516]

Sub. Code: 3021

**DIPLOMA IN MEDICAL RADIODIAGNOSIS (DMRD)
EXAMINATION
RADIODIAGNOSIS INCLUDING NUCLEAR MEDICINE**

Q.P. Code : 343021

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

Maximum : 100 marks

Answer ALL questions in the same order.

I. E laborate on : Pages Time Marks

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

1. Describe the conventional, modified IVP. Describe its

findings in chronic Renal infections and obstructive
uropathy.

11 35 15

2. Imaging in Acute Abdomen. 11 35 15

II. Write notes on :

1. Imaging in Meckels Diverticulum. 4 10 7

2. Posterior urethral valve. 4 10 7

3. Imaging and interventions in Breast. 4 10 7

- | | | | |
|--|---|----|------|
| 4. CT colonography and virtual colonoscopy. | 4 | 10 | 7 |
| 5. Role of PET CT in evaluation of malignancies. | 4 | 10 | 7 |
| 6. “Target Scan”. | 4 | 10 | 7 |
| 7. IUGR – Role of USG, Doppler. | 4 | 10 | 7 |
| 8. Interventions in Hepato Biliary System. | 4 | 10 | 7 |
| 9. Describe the principle and clinical applications of dual energy in CT scanning. | | 4 | 10 7 |
| 10. Radio nucleide imaging of gastric motility. | 4 | 10 | 7 |
