

MANIPAL UNIVERSITY**THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2011****SUBJECT: PHYSICS AND DARK ROOM TECHNIQUES**

Tuesday, June 07, 2011

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ **Answer all questions.**

✍ **All questions carry equal marks.**

1. List the types of x-ray generator and explain three phase generator.
2. Explain the importance of x-ray generator in the production of x-ray for medical imaging.
3. **Write a short note on:**
 - 3A. G M counter
 - 3B. Pocket dosimeter
 - 3C. Justification of practice in medical imaging
 - 3D. Optimization of technique
4. Describe the basic principle of image formation and its development; in screen film radiography.
5. **Write a short note on:**
 - 5A. Film screen combination.
 - 5B. Dark room ventilation and film storage.



MANIPAL UNIVERSITY**THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2011****SUBJECT: RADIOLOGICAL PROCEDURES**

Thursday, June 09, 2011

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ **Answer all questions. Each question carries 8 marks.**

1. Describe the indication, contraindication and procedure for lumbar myelography.
2. Describe the preparation, procedure and filming for barium enema.
3. What is Barium swallow?
4. What are the different types of iodinated contrast media used in radiology?
5. Write short note on HSG.

✍ **Describe the following radiographic views:**

6. View for Intercondylar notch.
7. View for mastoids air cells.
8. Hand PA & Lateral.
9. Ring Finger- AP, Lateral and Oblique.
10. View for optic foramina.



MANIPAL UNIVERSITY**THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2011****SUBJECT: NEW IMAGING MODALITIES AND RECENT ADVANCES**

Saturday, June 11, 2011

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ **Answer all the questions. All questions carry equal marks.**

1. Explain the basic principle of MRI in detail.
2. Write short note on:
 - 2A. Different between T1 and T2 weighted image.
 - 2B. Conventional spin echo.
3. Explain direct capture radiography in detail.
4. USG protocol of abdomen and pelvis in RTA.
5. Define mammography. Explain the type of filters used in Mammography in detail.
6. Explain PACS in detail.
7. CT protocol for abdomen with the history of pancreatitis.
8. Explain the subtraction technique used in DSA.
9. Write note on MR gradient.
10. Write a protocol for MRI shoulder.

