

MANIPAL UNIVERSITY
THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – DECEMBER 2009
SUBJECT: PHYSICS AND DARK ROOM TECHNIQUES

Thursday, December 10, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

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- ✍ **Answer all questions.**
- ✍ **All questions carry equal marks.**
1. Describe in detail about the production of x-rays and mention the type of beam used in routine radiography and mammography.
 2. Write a note on soft x-rays, its significance and control in medical imaging.
 3. Write short notes on:
 - 3A. G M counter
 - 3B. Pocket dosimeter
 - 3C. Justification of practice in medical imaging
 - 3D. Optimization of technique
 4. What is characteristic curve? Explain its significance in film-screen radiography.
 5. Write short notes on:
 - 5A. Non screen film.
 - 5B. Care of intensifying screen.



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THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: RADIOLOGICAL PROCEDURES

Friday, December 11, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL questions. Each question carries EIGHT marks.**

1. Define MCU and describe the procedure.
2. Describe the preparation of patient who is posted for the procedure of Intravenous Urography and write a note on the filming sequence in the procedure.
3. Describe the indication of ERCP and PTBD.
4. Write in brief about the angiographic equipments.
5. Write short note on FTR.

✍ **Describe the following radiographic views:**

6. Submentovertex view
7. Views for TM joint
8. Leg AP and Lateral
9. Ankle joint- AP, Lateral and Oblique
10. Stenvers view



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THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: NEW IMAGING MODALITIES AND RECENT ADVANCES

Saturday, December 12, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Answer ALL the questions.

✍ All questions carry equal marks.

1. Define mammography. Explain the type of filters used in Mammography in detail.
2. Write detail notes on electron beam CT scan with diagram.
3. Explain DSA and its type in detail.
4. Write the protocol for MRI brain to rule out Micro Adenoma.
5. What is ultrasound? Explain the type of interaction of ultrasound with matter.
6. Write short notes on:
 - 6A. State the Larmor equation and its significance.
 - 6B. Time gain control.
7. Explain PACS in detail.
8. CT protocol for abdomen with the history of pancreatitis.
9. Write the protocol for MRI knee.
10. Write the protocol for CT renal angio.

