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# MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

**THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2006**

**SUBJECT: PHYSICS AND DARK ROOM TECHNIQUES**

Friday, June 16, 2006

Time: 3 Hrs.

Max. Marks: 80

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✍ **Answer all questions.**

✍ **All questions carry equal marks.**

1. Write short notes on Rotatory Anode tube.
2. Write short notes on structure of film (Gross section with Diagram).
3. What is development? Describe in detail the constituents of developer.
4. Write short notes on image intensifier.
5. Describe the production of X-rays.
6. What is characteristic curve? Describe with a figure.
7. Write short notes on Auto transformer.
8. Write short notes on intensifying screens.



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# MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

**THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2006**

**SUBJECT: RADIOGRAPHIC SPECIAL PROCEDURES**

Saturday, June 17, 2006

Time: 3 Hrs.

Max. Marks: 80

✗ Answer all questions.

✗ Each question carries EIGHT marks.

1. Write in detail about patient preparation, indications and contraindications of barium enema.
2. Write short notes on:
  - 2A. Sialography.
  - 2B. Contrast media used in gastrointestinal tract other than barium.
3. Write short note on:
  - 3A. Role of compression in IVU.
  - 3B. Fallopian tube recanalisation.
4. Write in detail about indications, contraindications and procedure of hysterosalpingography.
5. Classify contrast media and write in detail about contrast media toxicity.
6. Describe following views for evaluating Patella:
  - 6A. Skyline view.
  - 6B. Lateral.
7. Describe lateral view of cranium and describe the Water's view positioning.
8. Describe the positioning and PA and lateral chest radiograph.
9. Write short notes on CT numbers.
10. Describe AP view of abdomen. Also describe the differences between AP view abdomen and KUB radiograph.



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# MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

## THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2006

### SUBJECT: NEW IMAGING MODALITIES AND RECENT ADVANCES

Monday, June 19, 2006

Time: 3 Hrs.

Max. Marks: 80

✍ Answer all questions.

✍ All questions carry equal marks.

1. What are the various contrast agents used in angiography? Describe rates of injection and volume of contrast used in evaluation of abdominal aorta.
2. What are the various equipments used in angiography laboratory? Describe the types of catheters that can be used in angiography of brain.
3. What are the indication, patient preparation for MR and contraindications for MR studies?
4. Describe MR protocol for evaluation of knee joint.
5. Describe CT artifacts in detail.
6. Enumerate types of algorithms for image reconstruction. Describe anyone in detail.
7. What is the principle of ultrasound?
8. What are the different modes of ultrasonic display?
9. Discuss Digital fluoroscopy system.
10. Describe CT protocol for evaluation of acetabulum and hip joint.

