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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: PHYSICS AND DARK ROOM TECHNIQUES

Thursday, June 14, 2007

Time: 3 Hrs.

Max. Marks: 80

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

1. Describe the line focus principle.
2. Write a short note on developer solutions.
3. Mention the personal monitoring devices and write about film badge.
4. Draw the diagram and label the parts of x-ray tube.
5. Write a short note on dark room safe lighting.
6. Write a short note on laws of transformer.
7. Write a short note on TLD.
8. Write a short note on rectification.
9. Describe content and action of Fixer solution.
10. Write a short note on anode heel effect.



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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: RADIOGRAPHIC POSITIONING & SPECIAL PROCEDURES

Friday, June 15, 2007

Time: 3 Hrs.

Max. Marks: 80

Answer ALL questions.

1. Describe the following Radiographic positioning:

- 1A. Leg: AP and lateral.
- 1B. Femur: AP and lateral.
- 1C. PNS: Caldwell view.
- 1D. Chest: PA view.
- 1E. Scaphoid view.

(8×5 = 40 marks)

2. Describe about contrast media. Give brief description of contrast media in computerized tomography.

(8 marks)

3. Write in brief about following:

- 3A. Angiography.
- 3B. HSG.
- 3C. Barium swallow.
- 3D. IVU.

(8×4 = 32 marks)



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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: NEW IMAGING MODALITIES AND RECENT ADVANCES

Saturday, June 16, 2007

Time: 3 Hrs.

Max. Marks: 80

- ✍ Answer ALL questions.
- ✍ All questions carry equal marks.

1. Discuss CT protocol for evaluation of neck masses.
2. Discuss helical CT protocol for evaluation of liver.
3. Describe about time – gain – control.
4. What are transducers? Describe principal of transducers.
5. Discuss briefly interaction between ultrasound and matter.
6. What do you understand by digital fluoroscopy count?
7. Describe briefly construction and equipments in Angiography laboratory.
8. What are the principles of MRI?
9. Describe magnetic field gradient coil.
10. What is the protocol for MR evaluation of pelvis of female?

