Reg. No.										

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: PHYSICS AND DARK ROOM TECHNIQUES

Monday, May 28, 2012

Time: 10:00-13:00 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. Effect of X-ray filtration on patient as well as exposure factor.

3. Write a note on radiation detection and measurement.

4. **Write a short note on:**

4A. G M counter
4B. Pocket dosimeter
4C. Justification of practice in medical imaging
4D. Optimization of technique

5. **Write a short note on:**

5A. Non screen film
5B. Care of intensifying screen

Reg. No.

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: RADIOLOGICAL PROCEDURES

Wednesday, May 30, 2012

Time: 10:00-13:00 Hrs. Max. Marks: 80

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

1. Describe the procedure for cervical myelography.

2. Write a note on angiographic equipments.

3. Describe the indication, contraindication and complication for Barium meal.

4. Describe the different special techniques used in the study of upper GI tract.

5. Write short note on dacrocystography.

✍ **Describe the following radiographic views**

6. Views for apex of lung.

7. Humorous- AP & Lateral.

8. Carpel tunnel View.

9. Right SI joint.

10. Views for Para nasal sinuses.

Reg. No.										

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. M.I.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: NEW IMAGING MODALITIES AND RECENT ADVANCES

Friday, June 01, 2012

Time: 10:00-13:00 Hrs. Max. Marks: 80

Answer all the questions. Each question carries equal marks.

1. Explain the basic principle of ultrasound in detail.

2. Short note on:

2A. Multislice CT detector and its pitch.

2B. Beam hardening artifact.

3. MRI protocol of brain in microadenoma.

4. CT protocol of abdomen in case of pancreatitis.

5. Short note on:

5A. FLAIR pulse sequence.

5B. Free induction decay signal.

6. USG protocol for abdomen and pelvis.

7. Explain direct digital radiography in detail.

8. Explain image intensifier in detail with diagram.

9. What is PACS? Explain the different components of PACS.

10. Define Doppler shift. Explain the principle behind the continuous wave Doppler.