

**B.Sc. IN MEDICAL IMAGING TECHNOLOGY  
(BMIT)**

**Term-End Examination**

**June, 2014**

**BAHI-056 : ADVANCE PHYSICS OF  
RADIOLOGICAL EQUIPMENT - II**

*Time : 3 hours*

*Maximum Marks : 70*

**PART - A**

Answer **any five** questions. Each question carries  
8 marks. **8x5=40**

1. Explain principles of ultrasound. List the medical application of ultrasound.
2. Write the basic concepts of MR imaging with a short note on Magnetism.
3. Make neat diagram of different generation CT scanner and explain them in details.
4. Write in detail about safety and bioeffects of MR imaging.

5. Enumerate in details about acquisition technique with a short note on image quality in ultrasound.
6. Explain in details the different types of MR Coils and Magnets used in MR.
7. Make a neat diagram of CT tube and detectors and explain them in detail.
8. Enumerate in details with neat diagram about transducer and explain 3D-4D imaging

### **PART - B**

Write short notes on **any six** questions. Each question carries **five** marks. **5x6=30**

- (a) Multislice CT
- (b) Harmonic Imaging
- (c) C.T. Artefacts
- (d) MR coils
- (e) Spectroscopy
- (f) Spine Echo and Gradient Echo
- (g) K - Space
- (h) Principles of Doppler imaging and types
- (i) Contrast ultrasound