

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

Term-End Examination

June, 2016

00146

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

Time : 3 hours

Maximum Marks : 70

***Note :** There are nine questions. Attempt any six questions. Question no. 9 is compulsory.*

1. Describe the various modes of ultrasound used in diagnostic imaging along with their uses. 4+4
2. Describe the interaction of ultrasound with matter and process of image formation in diagnostic ultrasound. 4+4
3. Describe the various generations of CT. 8
4. Discuss in detail about multi-slice CT. 8
5. Explain about the basic principles of image reconstruction in CT. 8
6. Discuss in detail about bio-effects and safety in MRI. 8

7. Explain the basics of MR image formation (in Radiology). 8
 8. Enumerate the recent advances in diagnostic ultrasound used in radiology. 8
 9. Write short notes on any *five* of the following : $5 \times 6 = 30$
 - (a) Doppler effect used in diagnostic ultrasound 6
 - (b) Dual source CT 6
 - (c) RF shielding in MRI 6
 - (d) Ultrasound contrast media 6
 - (e) Endoluminal ultrasound transducers 6
 - (f) Contrast media used in MRI 6
 - (g) CT fluoroscopy 6
 - (h) Slip ring technology and its use in CT 6
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