

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

Term-End Examination

00383

December, 2016

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

Time : 3 hours

Maximum Marks : 70

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

1. Describe the construction and working of MDCT. 8
2. Describe the various types of coils used in MRI along with their uses. 8
3. Discuss the recent advances in ultrasound transducers used in diagnostic radiology. 8
4. Discuss about the safety issues in MRI. 8
5. Discuss in detail about radiation protection in CT. 8
6. Explain the principle of contrast ultrasound and sono-elastography. 8

7. Discuss the advantages and limitations of MRI over CT. 8
8. Discuss the advances in CT tube technology. 8
9. Write short notes on any **five** of the following. Each note carries 6 marks. $5 \times 6 = 30$
- (a) BOLD Imaging in MRI
 - (b) CT Detectors
 - (c) 'A' Mode Ultrasound
 - (d) Construction of Linear Transducer
 - (e) RF Shielding in MRI
 - (f) Superconductivity and its use in MRI
 - (g) MPR in CT
 - (h) Artefacts in CT
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