

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

Term-End Examination

December, 2017

**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 (nine) is compulsory.*

1. Discuss about the various types of transducers used in diagnostic (Radiology) ultrasound along with their applications. 4+4=8
2. Describe the various modes of ultrasound used in diagnostic ultrasound imaging along with their applications. 4+4=8
3. Discuss about recent advances in CT tube technology along with their pros and cons if any. 8
4. Explain in detail image reconstruction in CT. 8
5. Describe the construction and functioning of multislice CT. 8
6. Enumerate the various types of magnets used in MRI and discuss pros and cons of each. 4+4=8
7. Enlist the various safety issues in MRI and discuss each in detail. 8

8. Discuss the basics of image formation in MRI. 8
9. Write short notes on any five (5) of the following : 5x6=30
- (a) CT Artefacts
 - (b) MRI - contrast media
 - (c) Radiation dose measurement in CT
 - (d) Piezo - electric effect
 - (e) Slip ring technology
 - (f) Shimming in MRI
 - (g) MR Artefacts
 - (h) Detectors in CT
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