

[LJ 1016]

OCTOBER 2016

Sub. Code: 4016

**M.Sc. MEDICAL PHYSICS EXAMS  
FIRST YEAR  
PAPER VI – PHYSICS OF MEDICAL IMAGING**

*Q.P. Code : 284016*

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain generation of computed tomography scanner.
2. Explain principle of ultrasound production and various modes of ultrasound imaging.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Artifacts in computed tomography Imaging.
2. Transducer design in ultrasound.
3. Write a note on shielding in MRI.
4. T1 & T2 relaxation time in MRI.
5. Write note on X-ray quality assurance.
6. Scatter reduction in X-ray quality.
7. Interactions of X-rays with matter.
8. Tube design in mammography.
9. Construction of film and image formation in films.
10. Explain function of grid and its various types.

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