

[LN 1018]

OCTOBER 2018

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. Describe a modern X-ray tube and its function with a suitable diagram.
2. Describe the principle and function of a Magnetic resonance imaging system.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Write about any three Quality assurance procedures for CT scanners.
2. Continuous and characteristic spectra.
3. Automatic exposure control.
4. Write about the production and physical properties of ultrasound.
5. Discuss about the various factors that affect contrast and resolution.
6. Compare and contrast CR and DR systems.
7. Write about the films and image formation in films.
8. Discuss in detail about the different types of grids with diagrams.
9. Write in detail about the mammography unit.
10. Write about the dose reduction methods in CT.

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