

[LI 0416]

APRIL 2016

Sub. Code: 4016

**M.Sc., MEDICAL PHYSICS DEGREE EXAMINATION
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 in detail how an image is formed using ultrasound. Discuss about various types of probes used in clinical scanners and the different modes of imaging.
2. Explain in detail the various quality assurance procedures for a Computed tomography scanner.

II. Write notes on:

(10 x 6 = 60)

1. Rotating anode x-ray tube.
2. Factors affecting image quality in digital radiography systems.
3. Discuss in detail the various beam restrictors used in radiographic imaging.
4. Image intensifier.
5. Explain in detail on manual film processing.
6. Direct DR system.
7. What are grids? Discuss on the various types of grid cut-off.
8. Artefacts in CT.
9. DAP and its relevance in Radiology.
10. Dose reduction strategies in CT.
