

**B.Sc. RADIOLOGY IMAGING TECHNOLOGY
THIRD YEAR**

PAPER I – EQUIPMENTS OF MODERN IMAGING MODALITIES

Q.P. Code: 801821

Time : Three Hours

Maximum : 100 Marks

Answer All questions.

I. Elaborate on :

(3 x 10 = 30)

1. Elaborate in detail about signal encoding and Image formation in MRI.
2. Describe in detail the parts of Mammography machine with Neat diagrams.
3. Parts of Ultrasound transducer with adequate diagrams. Enumerate the various types of Ultrasonography transducers.

II. Write Notes on:

(8 x 5 = 40)

1. Superconducting Magnets.
2. Image processing in Computed Radiography system.
3. Contrast agents used in CT.
4. Radiofrequency Coils.
5. Image Reconstruction algorithms in CT.
6. Inversion Recovery (IR) Sequence.
7. Direct digital Radiography system
8. Interactions of Ultrasound with Matter

III. Short Answers on:

(10 x 3 = 30)

1. Photomultiplier Tube.
2. CT number.
3. Dixon method of Fat suppression.
4. Tissue Harmonic Imaging.
5. Pitch.
6. Echo Planar Imaging (EPI).
7. Surface Shaded Display.
8. Gadolinium as contrast medium.
9. Phosphor used in CR plates.
10. B Mode in Ultrasound.
