

[LG 0215]

FEBRUARY 2015

Sub Code: 1821

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. Explain the working, and reconstruction of computed tomography images.
2. Discuss about radiofrequency coils. Explain about various signal encoding for image formation in MRI.
3. Describe an Ultrasound transducer with adequate diagrams. Enumerate the various types of Ultrasonography transducers.

II. Write Notes on:

(8 x 5 = 40)

1. Spin echo sequence.
2. Contrast agents used in CT.
3. Interaction of ultrasound with matter.
4. Explain about how image is formed in computed radiography.
5. Explain in detail about indirect flat panel detectors.
6. Discuss about any 3 artefacts in MRI.
7. Mammography machine.
8. Factors affecting image quality in MRI.

III. Short Answers on:

(10 x 3 = 30)

1. Ring artifacts.
2. Flip angle.
3. Gadolinium as contrast medium.
4. Tomography.
5. Piezo-electric effect.
6. CT number.
7. Gradient coil.
8. Phosphor used in CR plates.
9. Focused transducer.
10. Filtration in x-ray imaging.
