

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**  
**SECOND YEAR**  
**PAPER II – EQUIPMENTS, BASIC TECHNIQUES OF MODERN**  
**IMAGING MODALITIES**

*Q.P. Code: 841412*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain with diagram, the construction of mammographic equipment.
2. Explain the various generations of CT scanner.
3. Explain various types of magnets used in MRI.

**II. Write Notes on:**

**(10 x 5 = 50)**

1. Explain the construction and working of CR reader.
2. Indirect digital radiography.
3. Construction of ultrasound probe.
4. Detectors used in CT.
5. T1 and T2 relaxation time.
6. Proton density imaging.
7. Artifacts in ultrasound imaging.
8. Advantages of MR imaging over CT imaging.
9. Contraindications of MRI.
10. CT angiography.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Advantages of computed radiography.
2. CCD technology.
3. Mammographic film.
4. CT Number.
5. Pitch.
6. Larmour frequency.
7. Why hydrogen is widely used in MR imaging?
8. Doppler effect in ultrasound.
9. Piezoelectric effect.
10. Advantages of Digital Image Storage.

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