

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1412

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY

SECOND YEAR – (Regulation from 2010-2011)

**PAPER II – EQUIPMENTS, BASIC TECHNIQUES OF MODERN IMAGING
MODALITIES**

Q.P. Code: 841412

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the basic principle of MRI. List various coils involved in Imaging with their specific uses.
2. Describe in detail about parts of Mammography machine with neat diagram.
3. Explain basic principle of Computed Tomography. Discuss briefly about Helical/Spiral CT.

II. Write Notes on:

(10 x 5 = 50)

1. Discuss briefly about T1 and T2 relaxation and its utility in MRI.
2. What are the factors controlling MRI Imaging Quality?
3. What is CT Dose Index?
4. Explain about Gradient Recalled Echo (GRE).
5. Describe the interaction of Ultrasound with matter.
6. Artifacts in MRI Scan and how to rectify?
7. Explain the CR system.
8. Types of Magnets used in MRI.
9. Biosafety in MRI.
10. Explain about CT Angiography.

III. Short Answers on:

(10 x 2 = 20)

1. B mode in USG.
2. What is a Partial volume Artifact?
3. What is Piezoelectric effect?
4. Name four USG Artifacts.
5. DWI in MRI.
6. What is Streak Artifacts?
7. What is HU?
8. What is Teleradiology?
9. What is Fringe Field?
10. What is Larmor frequency?
