

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

**[AHS 1123]**

**NOVEMBER 2023**

**Sub. Code: 1852**

**B.Sc. RADIOGRAPHY & IMAGING TECHNOLOGY**

**THIRD YEAR (Regulation 2018-2019 onwards)**

**PAPER II – MODERN IMAGING TECHNIQUES AND RECENT TRENDS IN  
IMAGING**

***Q.P. Code: 801852***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain CT Perfusion protocol for Acute Stroke.
2. Explain Dark and Bright Blood Imaging in MRI.
3. Explain the Chemoembolization procedure for Hepatocellular Carcinoma.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Bone Scan.
2. Curvilinear Probe and its uses.
3. Define Inverse Square Law. Calculate intensity at 1 m and 4 m; if intensity at 2 meter is 100 mR.
4. Digital Breast Tomography.
5. STIR Sequence and its uses.
6. Chemical shift and Aliasing artifact in MRI.
7. Surface shaded display and Volume Rendering in CT.
8. Patient preparation and techniques of MR Shoulder imaging.

**III. Short answers on:**

**(10 x 3 = 30)**

1. CT Filters and uses.
2. Uses of Carbene dioxide in Imaging.
3. Define Half-life and half-life of Technetium 99m.
4. DSA.
5. Define Heel effect and how it is technically utilized?
6. What is DEXA?
7. HRCT.
8. Volume coil and its uses.
9. F-MRI principle.
10. Define HU and write HU Value of Muscle and Bone.

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