

B.Sc., RADIOGRAPHY AND IMAGING TECHNOLOGY**1851 – EQUIPMENTS OF ADVANCED IMAGING MODALITIES****UNIT 3****SUB TOPIC – 4 MRI SCANNERS****I. Elaborate on 10 MARKS****Reference – The Tamilnadu Dr.M.G.R Medical University Question Paper**

S.No	Question	Reference	Bloom's Taxonomy
1	Write in detail about MRI scanners as a special radiography technique, including history, basic physical principle, physical principles, NMR signals, instrumentation, hardware, MR system components, magnet system, magnetic shielding, RF shielding, bioeffects of MRI, site selection and safety, reconstruction system, different coils used, NMR signals advantage, imaging methods, pulse imaging sequences, spectroscopy parameters, calibration and image acquisition, reconstructions, 3D images, image contrast, factors affecting image quality, artifacts, difference between CT and MRI images, host computer, viewing archiving, hard copy, image formation and storage device.	November 2025	Analyze

II. Write notes on 5 MARKS**Reference – The Tamilnadu Dr.M.G.R Medical University Question Paper**

S.No	Question	Reference	Bloom's Taxonomy
1	Write notes on history, basic physical principle, physical principles, NMR signals, instrumentation, hardware, MR system components, magnet system, magnetic shielding, and RF shielding in MRI scanners, with focus on foundational aspects and procedural setup.	April 2026	Understand
2	Write notes on bioeffects of MRI, site selection and safety, reconstruction system, different coils used, NMR signals advantage, imaging methods, pulse imaging sequences, spectroscopy parameters, calibration and image acquisition, reconstructions, 3D images, image contrast, factors affecting image quality, artifacts, difference between CT and MRI images, host computer, viewing archiving, hard copy, and image formation and storage device in MRI scanners.	March 2025	Understand

III. WRITE SHORT NOTES ON 3 MARKS

Reference – The Tamilnadu Dr.M.G.R Medical University Question Paper

S.No	Question	Reference	Bloom's Taxonomy
1	Bioeffects of MRI, site selection, and safety in MRI scanners.	November 2025	Apply
2	Artifacts, factors affecting image quality, and difference between CT and MRI images in MRI scanners.	April 2025	Remember