

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

[AHS 0523]

MAY 2023

Sub. Code: 2501

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
FIRST YEAR**

**(Candidates admitted from 2020-2021 Batch onwards)
PAPER II - RADIOLOGICAL PHYSICS**

Q.P. Code: 282501

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(2 x 20 = 40)

1. Enumerate the types of digital radiography. Describe each one briefly. Advantages and limitations of digital radiography compared with conventional film screen radiography.
2. a) Principles of radiation protection.
b) Describe various radiation units.
c) Discuss the methods used to decrease radiation exposure in fluoroscopy.

II. Write notes on:

(10 x 6 = 60)

1. Define and classify radiographic grids. Describe their various uses in radiography.
2. Describe AERB guidelines on X-ray room installation.
3. Short notes on HEEL effect.
4. Classify iodinated contrast media.
5. Motion artifacts in MRI. Methods to prevent them.
6. Cone beam CT.
7. Image intensifier.
8. Rotating anode in X-ray tube.
9. Diffusion weighted imaging.
10. Pressure injector.
