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

[AHS 1022] **OCTOBER 2022** **Sub. Code: 3601**

POST GRADUATE DIPLOMA IN RADIOLOGY & IMAGING TECHNOLOGY
(From 2014-2015 onwards)
PAPER I – FUNDAMENTALS OF RADIATION PHYSICS & PHYSICS OF DIAGNOSTIC RADIOLOGY

Q.P. Code : 363601

Time : Three hours **Answer ALL Questions** **Maximum : 100 Marks**

I. Elaborate notes on: **(2 x 20 = 40)**

1. Explain with the help of neat diagram the construction and working of stationary anode X –ray tube.

2. Describe the various generations of CT Scanners.

II. Write Short Notes on: **(10x6 = 60)**

1. Describe about self Induction and Mutual Induction.
2. Explain alpha decay and beta decay.
3. Factors that affect the quality and intensity of X – rays.
4. Write short notes about Transformer with neat diagram.
5. Define Linear Attenuation Coefficient and Mass Attenuation Coefficient.
6. Principles of Ultrasound.
7. CT Detectors.
8. Types of magnets used in MRI.
9. Magnetic lines of force and its properties.
10. Pocket dosimeter.

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