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

[AHS 0423] **APRIL 2023** **Sub. Code: 1802**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY
FIRST YEAR (Regulations 2010-2011 & 2014-2015 onwards)
PAPER II – GENERAL PHYSICS, RADIATION PHYSICS & PHYSICS OF DIAGNOSTIC RADIOLOGY
Q. P. Code: 801802

Time: Three hours **Maximum : 100 Marks**

Answer ALL Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain Photon interaction with matter.
2. Describe about importance of Grid in Radiography.
3. Write in detail about the types of Radioactivity.

II. Write notes on: **(8 x 5 = 40)**

1. Discuss the principle of Transformer.
2. Distinguish between Nuclear fission and Nuclear fusion.
3. Factors affecting quality of X-rays.
4. Hysteresis loss.
5. Intensifying screen.
6. Continuous and characteristic spectrum.
7. Write briefly about the Properties of Alpha ray.
8. Explain attenuation and its types.

III. Short answers on: **(10 x 3 = 30)**

1. Define Power and Energy.
2. Focal spot.
3. Line focus principle.
4. Galvanometer.
5. Thermionic Emission.
6. Radioisotope.
7. Define Inherent Filtration.
8. Define electric current. What is its unit?
9. Define half-life of a radioactive substance.
10. Define Atomic and Mass Number.

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