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

[AHS 1123] **NOVEMBER 2023** **Sub. Code: 1842**

B.Sc. RADIOGRAPHY & IMAGING TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II – GENERAL PHYSICS, RADIATION PHYSICS & PHYSICS OF DIAGNOSTIC RADIOLOGY
Q.P. Code: 801842

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

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

1. Explain about production of X-ray with a neat diagram.
2. Explain about the various modes of radioactive decay with example.
3. Write about beam limiting devices.

II. Write Notes on : **(8 X 5 = 40)**

1. Properties of electromagnetic radiation.
2. Bohr's Atomic model.
3. Half wave rectifier.
4. Properties of Alpha (α) rays.
5. Attenuation and Absorption.
6. Auto transformer.
7. Filament circuit.
8. Intensifying screen.

III. Short Answers on: **(10 X 3 = 30)**

1. Inherent filtration.
2. Coulomb's law.
3. Binding energy.
4. Thermionic emission.
5. Mass number and atomic number.
6. Write any three medical uses of artificial radioisotopes.
7. Define Work and write down its unit.
8. Half value thickness.
9. Nuclear Fusion.
10. Grid ratio.

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