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

[AHS 0423]   **APRIL 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. Elaborate the production of X-ray with a neat diagram.
2. Describe any one X-ray circuit with a neat sketch.
3. Discuss the Bremsstrahlung and characteristic X- ray spectrum.

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

1. Define Line focus principle.
2. Explain the transformers theory and loss.
3. Explain the Gamma ray sources of medical uses.
4. Explain HVT and TVT.
5. Compton Effect.
6. Define Linear and mass attenuation coefficient.
7. Latitude and Emulsion absorption.
8. Bean Restrictors.

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

1. Grid factor.
2. Define Fleming's Right hand rule.
3. Define Characteristic radiation.
4. What is the purpose of Vacuum in the X-ray tube?
5. What is X-ray generator?
6. What is Kerma and absorbed dose?
7. What is Non screen film?
8. Define Half Life period.
9. X-ray cassette.
10. Define Thermoluminescence effect.

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