B.Sc. RADIOLOGY IMAGING TECHNOLOGY / RADIO DIAGNOSIS TECHNOLOGY FIRST YEAR

PAPER II – GENERAL PHYSICS, RADIATION PHYSICS AND PHYSICS OF DIAGNOSTIC RADIOLOGY

O.P. Code: 801802

Time: Three Hours Maximum: 100 Marks

Answer All questions.

I. Elaborate on: $(3 \times 10 = 30)$

1. Discuss in detail about beam limiting devices.

- 2. Electromagnetic spectrum. Discuss about the various properties of xrays.
- 3. Explain in detail natural and artificial radioactivity. Discuss the various radioisotopes used in medicine.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Reasons for grid cut-off.
- 2. Intensifying screen.
- 3. Heat loss in transformer.
- 4. Film cassette.
- 5. HVT and TVT.
- 6. Stationary anode x-ray tube.
- 7. Full wave rectifier.
- 8. Interaction of xrays with matter.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Voltage and current.
- 2. Alternating current.
- 3. Coulombs law.
- 4. Ohms law.
- 5. Diodes.
- 6. Nuclear Fission reaction.
- 7. Tomography.
- 8. Capacitance.
- 9. Valve.
- 10. Self induction.
