

**B.Sc. RADIOLOGY IMAGING TECHNOLOGY
FIRST YEAR**

**PAPER II – GENERAL PHYSICS, RADIATION PHYSICS AND
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 with the help of neat diagram the construction and working of modern X-ray tube.
2. Write in detail about photo electric effect and its significance in diagnostic radiology.
3. Describe in detail, various types of grids used in diagnostic radiology.

II. Write notes on:

(8 x 5 = 40)

1. Electromagnetic radiation.
2. Laws of electromagnetic induction.
3. Artificial radioactivity.
4. Full wave rectifier circuit and its function.
5. Beam limiting devices.
6. Construction and function of intensifying screen.
7. Explain alpha decay and beta decay.
8. X-ray filtration.

III. Short answers on:

(10 x 3 = 30)

1. Einstein's formula.
2. Nucleus.
3. Step up transformer.
4. Electric current and its unit.
5. Units of radioactivity.
6. Half value layer.
7. X-ray tube housing.
8. Grid ratio.
9. Quantum mottle.
10. Types of cassette.
