[LJ 0816] AUGUST 2016 **Sub. Code: 1402**

DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY
FIRST YEAR
PAPER II – GENERAL PHYSICS, RADIATION PHYSICS AND PHYSICS OF DIAGNOSTIC RADIOLOGY

Q.P. Code: 841402

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

Answer All questions.

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

1. Discuss in detail on principles of radiation safety. Write a note on personnel monitoring devices.
2. Explain with diagram about high tension X-ray circuit.
3. Write in detail the principle and construction of modern X-ray tube.

II. Write notes on: **(10 x 5 = 50)**

1. Compton scattering.
2. Electromagnetic induction.
3. Full wave rectifier circuit.
4. Continuous radiation.
5. What are the various radioisotopes used in medicine?
6. Heat loss in transformer.
7. Methods to cool anode.
8. Explain the method to determine Half value layer.
9. Write a note on artificial radioactivity.
10. Film badge.

III. Short answers on: **(10 x 2 = 20)**

1. Focal spot.
2. Ohms law.
3. Dosimeter.
4. Tube current.
5. Focusing cup.
6. Filtration.
7. Rectifier.
8. Einstein’s formula.
9. Define radioactivity.
10. Excitation.

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