B.Sc. RADIOTHERAPHY TECHNOLOGY
FIRST YEAR
Paper II – BASIC PHYSICS & RADIATION PHYSICS

Q.P. Code: 801902

Time: Three hours **Maximum : 100 Marks**
Answer all questions

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

1. Describe the construction and working of a pocket Dosimeter.
2. Discuss the interaction of X and Gamma rays in the body.
3. Explain the principle of transformer. Discuss the construction and its working.

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

1. Explain how you will convert a galvanometer into an ammeter.
2. What are eddy currents? Give their applications. How are they minimized?
3. Explain the variation of photoelectric current with applied voltage.
4. Discuss the differences between Film Dosimeter and TLD.
5. Deduce an expression for the force on a current carrying conductor placed in a magnetic field.
6. Explain the quality and intensity of x-rays and factors influencing them.
7. Explain Victorean electrometer.
8. Explain the working of a half-wave and full-wave rectification.

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

1. What is a capacitor? Define its capacitance.
2. Explain induced e.m.f and current.
3. What are Isotopes? Give examples.
4. What is fluorescence?
5. Distinguish between conductors, Semi-conductor and Insulators.
6. Explain Permeability.
7. What is Solenoid?
8. What is Anode Heel effect?
9. What is LET?
10. Explain Dose equivalent.

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