[LN 1018] OCTOBER 2018 **Sub. Code: 4011**

M.Sc. MEDICAL PHYSICS DEGREE EXAMS
FIRST YEAR
PAPER I – RADIATION PHYSICS

Q.P. Code : 284011

Time : Three hours **Maximum : 100 marks**

I. Elaborate on : **(2 x 20 = 40)**

1. Describe in detail about interaction of heavy charged particles with matter.

2. Write in detail about the principle of working of transformer and explain in detail about its types.

II. Write notes on : **(10 x 6 = 60)**

1. Relation between KERMA and exposure.
2. Photoelectric effect.
3. Equivalent and effective dose.
4. Pair production and its application.
5. Define half life and derive an expression for it.
6. Stopping power ratio.
7. Cerenkov radiation.
8. Explain about the motion of an electron in an electric field.
9. Ionization and Excitation.
10. Merits and demerits of Rutherford atomic model.

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