

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321]

MARCH 2021

Sub. Code: 4011

(OCTOBER 2020 EXAM SESSION)

M.Sc. MEDICAL PHYSICS

FIRST YEAR (From 2010-2011 onwards)

PAPER I – RADIATION PHYSICS

Q.P. Code : 284011

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Explain with diagram of Alternative Current Generator working principle.
2. Explain with diagram of Fission and Fusion Reactors.

II. Write Short Notes on:

(10x6 = 60)

1. Explain Ohms law and Coulomb's law of electric force.
2. Explain Isotopes and Isomers with 2 examples.
3. What is Compton effect and Pair production.
4. Write about Artificial Radioactivity with 2 examples.
5. What is the radiation exposure at 1 meter distance, if it's exposure at 2 meters is 10R.
6. Merits and demerits of Rutherford Atomic Model.
7. Explain about Beta positive decay with example.
8. State the relation between Decay Constant and Half Life of a radioactive material.
9. Explain the Excitation and Ionisation.
10. Who discovered Radioactivity and What is Atomic No. & Mass No.
