

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

[AHS 0921]

**SEPTEMBER 2021
(MAY 2021 EXAM SESSION)**

Sub. Code: 4011

**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 the relative importance of various types of interactions of Radiation with matter.
2. Explain the properties of particle and photon radiations

II. Write Short Notes on:

(10x6 = 60)

1. State the SI unit of Energy and Radiation absorbed dose.
2. State the Transformer Law and its efficiency.
3. State the difference between Mutual and Self Induction.
4. What is LET(Linear Energy Transfer) and RBE(Relative Biological Effectiveness).
5. What is the radio-activity 2weeks before, if its present activity is 10curie and its Half Life is 7days.
6. Explain the Mass Defect.
7. Explain Stopping Power Ratio.
8. What is Linear and Mass absorption Coefficient.
9. What is Bragg Peak Curve.
10. Explain Isotope and Isomer with 2examples.
