

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

[AHS 0122]

**JANUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 4034

**M.Sc. MEDICAL PHYSICS
SECOND YEAR (From 2010-2011 onwards)
PAPER IV – RADIATION SAFETY
*Q.P. Code : 284034***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Explain about the planning of Telecobalt Installation with neat sketch.
2. Discuss in detail about the evaluation of Radiation Hazards in Brachytherapy facility.

II. Write Short Notes on:

(10x6 = 60)

1. Explain the sources of radiation exposure in Diagnostic Radiology.
2. Define Equivalent Dose and Effective Dose. Mention the Equivalent and Effective Dose Limits for Public and Occupational Worker as per Annals of ICRP 103.
3. Discuss the role of Radiological Safety Officer.
4. Discuss the Treatment techniques for solid, liquid and gaseous radioactive Waste.
5. Area Monitoring.
6. Labeling and Marking of packages for transportation of Radioactive sources.
7. Principles of Radiation Protection
8. Genetic Effects of Radiation.
9. ALARA Principle.
10. Radiation accidents and Emergencies during Loading and unloading of sources.
