

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

[AHS 0921]

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

Sub. Code: 2304

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
FIRST YEAR (From 2019-2020 onwards)
PAPER IV – RADIATION PHYSICS AND RADIATION CHEMISTRY
*Q.P. Code : 282304***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Explain different types of Radiation detectors in detail?
2. Explain the basic principles of chromatography and Write in detail about different types of chromatography

II. Write Short Notes on: (10x6 = 60)

1. What are the interactions of radiation with matter? Describe any two of them in detail.
2. Decay scheme of Tc-99m and Iodine-131.
3. Radio isotopes used in Nuclear Medicine.
4. Binding forces between nuclear particle.
5. Electron capture and gamma decay.
6. Single channel analyser system.
7. Redox reactions.
8. Solvent extractions.
9. Buffer solutions.
10. Gel chromatography.
