

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

[AHS 0921]

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

Sub. Code: 2307

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
FIRST YEAR (From 2019-2020 onwards)
PAPER VII – RADIOPHARMACY - I
*Q.P. Code : 282307***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Mo⁹⁹-Tc^{99m} generator system.
2. Principle and operation procedures of Medical cyclotron.

II. Write Short Notes on:

(10x6 = 60)

1. Mechanism of ¹⁸F₂FDG.
2. Millipore filtration.
3. Formulation of Tc^{99m} DTPA.
4. Calculate and label Tc^{99m} MAA particles, required for a patient with one lung who came for VQ study, if the vial contains 5Lacs particles totally.
5. Interference of Mo⁹⁹ on Tc^{99m} eluate.
6. Pharmacokinetic and Pharmacodynamic properties of Tc^{99m} Medronate.
7. Particle size of Tc^{99m} sulphur colloid, during heating process.
8. Ascending chromatography.
9. Alumina and Mo⁹⁹ Breakthrough test.
10. Carrier free Radionuclides.
