

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

[AHS 0222]

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

**Sub. Code: 2307**

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY  
FIRST YEAR**

**(Candidates admitted from 2019-2020 onwards – Paper VII)**

**(Candidates admitted from 2020-2021 onwards – Paper VIII)**

**PAPER VII & VIII – RADIOPHARMACY - I**

***Q.P. Code : 282307***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Rb<sup>82</sup> generator system.
2. Production of N<sup>13</sup> in cyclotron.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Mechanism of Tc<sup>99m</sup>ECD complex.
2. Enumerate on wet and dry generator Tc99m system.
3. Tc99mPlatlet labeling methods.
4. Formulation of Tc99mMIBI.
5. Chemical structures of Tc99mTetrofosmin, Tc99mMDP.
6. Thin layer chromatography & Retardation factor.
7. Criteria's for selecting Radionuclide's for therapy and diagnostic nuclear medicine.
8. Modified In-Vitro RBC labeling method.
9. Synthesis of <sup>18</sup>FDG.
10. Tc99m Sulphur colloid labeling for Lymphoscintigraphy.

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