

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

[AHS 0122]

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

Sub. Code: 2315

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
SECOND YEAR (From 2019-2020 onwards)
PAPER V- RADIOPHARMACY - II
*Q.P. Code : 282315***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Various Quality Control of PET radiopharmaceuticals by TLC scanner, HPLC and Gas Chromatography (GC).
2. Describe various methods of iodination technique and their merits and disadvantages?

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

1. Quality Control Tests for Radiopharmaceuticals other than PET.
2. Bio-distribution studies.
3. Synthesis of PET Radiopharmaceuticals.
4. Quality control of ^{99m}Tc-Elute.
5. ISO and ISI Standards In Radiopharmaceuticals.
6. LD_{50/60} of a radiopharmaceutical. How can you determine this quality?
7. Regulatory requirements for the dispensing and supply of radiopharmaceuticals.
8. Recent Trends in Radiopharmaceuticals.
9. Ligands and Labelling of Molecules.
10. Specific Activity role in radiopharmaceutical.

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[AHS 1022]

OCTOBER 2022

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**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
SECOND YEAR
(Candidates admitted from 2019-2020 & 2020-2021 onwards)
PAPER V- RADIOPHARMACY-II**

Q. P. Code: 282315

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

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

1. Characteristics of Ideal Radiopharmaceuticals and Factors Influencing the Design of New Radiopharmaceuticals.
2. Various Quality Control of PET radiopharmaceuticals by TLC scanner, HPLC and Gas Chromatography (GC).

II. Write notes on: **(10 x 6 = 60)**

1. Good Manufacturing practice (GMP) in Radiopharmacy.
2. SI and ISO standards in radiopharmaceuticals.
3. Regulations, Ethics and Registration of radiopharmaceuticals. Barriers of health communication.
4. Specific Activity role in radiopharmaceutical.
5. Iodination and its Techniques.
6. Bio-distribution studies.
7. Radionuclide and Radiochemical Purity.
8. Biological Tests.
9. Role of Chromatographic Solvent and Rf value.
10. Quality control of ^{99m}Tc-Elute.
