

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

[AHS 0122]

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

Sub. Code: 2313

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
SECOND YEAR (From 2019-2020 onwards)
PAPER III – THERAPEUTIC NUCLEAR MEDICINE TECHNIQUES
*Q.P. Code : 282313***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Briefly describe the procedures for administration of 5 mCi ¹³¹Iodine for treatment of hyperthyroidism.
2. Describe the procedure for radiation synovectomy for haemophilia.

II. Write notes on:

(10 x 6 = 60)

1. Radiopharmaceutical for palliation of painful bone metastases.
2. Personnel monitoring during ¹⁷⁷Lu DOTATATE administration.
3. Calibration procedure for dose calibrator for beta emitters.
4. ¹⁸⁶Re.
5. Radiation safety procedure for ¹³¹I-MIBG administration for diagnostic study.
6. Post therapy imaging.
7. Design of radionuclide administration room for therapy procedures.
8. Disposal of radioactive waste.
9. Transport index.
10. Accidental spill of radioactive material.

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[AHS 1022]

OCTOBER 2022

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**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
SECOND YEAR (From 2019-2020 & 2020-2021 onwards)
PAPER III – THERAPEUTIC NUCLEAR MEDICINE TECHNIQUES**

Q.P. Code : 282313

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Briefly describe the procedures for administration of 100 mCi ¹³¹I-MIBG for treatment of malignant Pheochromocytoma.
2. Describe the procedure for administration of ¹⁷⁷Lu-DOTATATE therapy for neuroendocrine tumours.

II. Write notes on:

(10 x 6 = 60)

1. Radiopharmaceutical for radiation synovectomy of knee joint in a patient with haemophilia.
2. Quality control of ¹³¹I-MIBG for diagnostic imaging.
3. Calibration procedure for dose calibrator.
4. ¹⁵³Sm EDTMP.
5. Radiation safety procedures for radiation synovectomy.
6. Post synovectomy imaging.
7. Design of delay tank.
8. Post therapy imaging for ¹³¹Iodine therapy.
9. Transport index for radiopharmaceuticals.
10. Accidental spill of radioactive Iodine.
