

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

[MD 1224]

DECEMBER 2024

Sub. Code: 4071

M.D. DEGREE EXAMINATION

NUCLEAR MEDICINE

PAPER III – THERAPEUTIC NUCLEAR MEDICINE

Q.P. Code: 204071

Time : Three Hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Variants of Hepatocellular carcinoma and its management.
2. Neuro endocrine tumour WHO classification and its management.

II. Write notes on:

(10 x 7 = 70)

1. Management of radio-iodine refractory DTC.
2. Radiosynoviorthosis.
3. VISION trial.
4. Amino acid infusion in PRRNT.
5. Design of radio pharmacy area for HDT.
6. Role of radiopharmaceuticals in drug delivery.
7. Radio Ligand therapy.
8. Dosimetry in Radio iodine ablation for hyperthyroidism.
9. Alpha emitters in the management of bone pain.
10. Papillary Thyroid microcarcinoma management.

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

[MD 1025]

OCTOBER 2025

Sub. Code: 4071

M.D. DEGREE EXAMINATION

NUCLEAR MEDICINE

PAPER III – THERAPEUTIC NUCLEAR MEDICINE

Q.P. Code: 204071

Time : Three Hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the role of hybrid imaging in oncology, advantages of PET-CT over standalone PET or CT in the staging and response assessment of lymphoma.
2. Diagnostic approach and treatment monitoring of differentiated thyroid carcinoma, emphasizing the roles of Iodine-131 scintigraphy and FDG PET-CT.

II. Write notes on:

(10 x 7 = 70)

1. Myocardial perfusion imaging (MPI) – Indications, comparison of Tc-99m and Thallium-201 agents and interpretation criteria.
2. Diuretic renography in obstructive versus non-obstructive hydronephrosis.
3. Artifacts in bone scintigraphy and strategies to avoid misinterpretation, particularly in metastatic workup.
4. Clinical utility of FDG PET-CT in evaluating infectious pathologies.
5. Ga-68 DOTATATE PET-CT – Imaging protocol and advantages over conventional modalities in neuroendocrine tumors.
6. Indications and interpretation of DaTscan in the evaluation of movement disorders.
7. Dual-tracer parathyroid scintigraphy using Tc-99m Sestamibi and 1-123.
8. Gastric emptying scintigraphy.
9. Pulmonary embolism imaging Modified PLOPED criteria for V/Q scans.
10. Lymphoscintigraphy technique its clinical utility in sentinel lymph node mapping for breast cancer patients.
