

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

[AHS 0423]

APRIL 2023

Sub. Code: 2113

**B.Sc. NUCLEAR MEDICINE TECHNOLOGY**  
**SECOND YEAR (Regulations 2010-2011 & 2018-2019 onwards)**  
**PAPER III – NUCLEAR MEDICINE TECHNIQUES AND**  
**SPECIAL PROCEDURES**  
*Q.P. Code: 802113*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain Myocardial Perfusion Scintigraphy with SPECT and PET.
2. Discuss Treatment Protocol, Pre Therapy, During Admission and Post Discharge precautions for I-131 ablation in Thyroid Cancer.
3. Explain the different phase in the Bone scan with clinical indication and Imaging protocol.

**II. Write Notes on:**

**(8 x 5 = 40)**

1. What are the methods of RBC labelling and its uses?
2. Difference between Ictal and Interictal SPECT study.
3. Myocardial viability studies.
4. Radiation Synovectomy Tracers.
5. Gastroesophageal Reflux studies.
6. Radiopharmaceuticals used for Brain Imaging and its Physical Characteristics.
7. Explain Lymphoscintigraphy.
8. Parathyroid Scintigraphy.

**III. Short Answers on:**

**(10 x 3 = 30)**

1. Pediatric dosage calculation.
2. How is <sup>99m</sup>Tc MDP is taken up by bones?
3. Cardiac Output and MUGA.
4. Mechanism of localization of Ga-68 psma and Dotanoc.
5. Precautions for breast feeding mother before Thyroid scan.
6. TARE.
7. Shunt evaluation.
8. TSH Stimulation test.
9. What are the cardiac PET agents and it's Localization?
10. First Pass Cardiac Test.

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