

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

[AHS 0222]

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

Sub. Code: 2308

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

(Candidates admitted from 2019-2020 onwards – Paper VIII)

(Candidates admitted from 2020-2021 onwards – Paper IX)

PAPER VIII & IX – CLINICAL NUCLEAR MEDICINE TECHNIQUES I

Q.P. Code : 282308

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. What are the clinical indications for hepatobiliary scintigraphy? Write in detail the technique of scintigraphy in any one of them.
2. Describe the technique of Multigated Blood pool Acquisition and the steps in processing of images for estimation of ejection fraction of left ventricle.

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

1. Split renal function.
2. Principle of lung perfusion study.
3. Principle of Meckel's diverticulum scintigraphy.
4. Thyroxine after total thyroidectomy in thyroid cancer patients.
5. Vesicoureteric reflux.
6. Nephrostomy.
7. Pyeloplasty.
8. Tracheostomy.
9. Ewing's sarcoma.
10. Radiation synovectomy.

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Answer ALL Questions

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I. Elaborate notes on:

(2 x 20 = 40)

1. Discuss the principle of radio-immuno-assay (RIA) and radio-immuno-metric assay (IRMA). Advantages and disadvantages of RIA and IRMA.
2. Discuss the various methods of Red Blood Cells (RBC) labeling. What are advantages and disadvantages of each method?

II. Write Short Notes on:

(10x6 = 60)

1. TSH stimulation test.
2. Infection imaging.
3. Vitamin B₁₂ absorption study.
4. Perchlorate discharge test.
5. Adrenal gland imaging.
6. RBC survival study.
7. Lymphatic Scintigraphy.
8. Sentinel node Scintigraphy.
9. Plasma volume estimation.
10. Lacrimal Scintigraphy.
