

B.Sc. NUCLEAR MEDICINE TECHNOLOGY
SECOND YEAR
PAPER III – NUCLEAR MEDICINE TECHNIQUES AND
SPECIAL PROCEDURES

Q.P. Code: 802113

Time: Three Hours

Maximum: 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. A fifty year old lady with hypertension, diabetes and swelling in her left lower limb only. List out at least 3 possible nuclear scans that could be done in her and describe in detail the technology and techniques involved in doing a lymphoscintigram.
2. A fifty year old male patient with hypertension and diabetes complains of breathlessness and tender swelling of the calf muscles in his left lower limb. List at least 3 possible Nuclear Scans that will be helpful to his physician for managing his clinical condition and describe in detail the procedures involved in doing a Lung Perfusion Scan.
3. Discuss in detail about the procedures involved in performing a Stress – Rest Myocardial Perfusion Study.

II. Write Notes on:

(8 x 5 = 40)

1. Coincidence Imaging.
2. Intra Abdominal Bleed Imaging.
3. Identification of Duodeno-gastric Reflux in Hepatobiliary Imaging.
4. DTPA Renal Scan Method.
5. SPECT Tracers that cross Blood Brain Barrier.
6. Star Artefact.
7. Scintimammography.
8. PET Bone Scans.

III. Short Answers on:

(10 x 3 = 30)

1. 5 Common Radiopharmaceuticals in Oncology.
2. Imaging Meckel's Diverticulum.
3. Common Isotopes of Iodine in Nuclear Medicine.
4. Uses of MIBI.
5. Complications in Post-Renal Transplant Imaging.
6. Scatters in Imaging Processing.
7. Protocols in PET-CT.
8. Testicular Scan.
9. ^{99m}Tc- Sulphur Collid.
10. Crystals used in PET Detectors.
