

[LN 1018]

OCTOBER 2018

Sub. Code: 4033

**M.Sc. MEDICAL PHYSICS EXAMS
SECOND YEAR
PAPER III – PHYSICS OF NUCLEAR MEDICINE AND INTERNAL
DOSIMETRY**

Q.P. Code: 284033

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Describe in detail planning of nuclear medicine department with PET/CT and SPECT/CT.
2. Describe in detail design, construction and working of SPECT Gamma camera.

II. Write notes on:

(10 x 6 = 60)

1. Quality control of thyroid uptake probe.
2. Discuss about any two reconstruction techniques used in nuclear medicine.
3. Radioisotope generator.
4. Compartment models.
5. I-131 dosimetry in thyroid cancer.
6. Rectilinear scanner.
7. Coincidence detection in PET.
8. PET detectors and their characteristics.
9. Unsealed sources in nuclear medicine.
10. Draw delay tank diagram and explain.
