

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

[AHS 0321]

MARCH 2021

Sub. Code: 4033

(OCTOBER 2020 EXAM SESSION)

M.Sc. MEDICAL PHYSICS

SECOND YEAR (From 2010-2011 onwards)

**PAPER III – PHYSICS OF NUCLEAR MEDICINE AND INTERNAL
DOSIMETRY**

Q.P. Code : 284033

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Describe the working principle of PET and reconstruction methods involved.
2. Quality Control of Radiopharmaceuticals for clinical use.

II. Write Short Notes on:

(10x6 = 60)

1. PET CT quality assurance tests.
2. Red cell survival studies in NM.
3. Types of collimators used in Gamma camera.
4. Scintillators and scintillation principles.
5. Decontamination of a radioactive spill.
6. Resolution recovery in SPECT.
7. Layout design recommended by AERB for a PET facility.
8. Bone scintigraphy.
9. Radiation Synovectomy.
10. Palliative therapeutic radiopharmaceuticals used in Nuclear medicine.
