

[LL 1017]

OCTOBER 2017

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 about the planning and shielding calculations of PET- CT installation.
2. Describe in detail the basic principle, design and working of Gamma camera.

II. Write notes on:

(10 x 6 = 60)

1. Two dimensional data acquisition in PET.
2. Explain about the iterative reconstruction and their draw backs.
3. Construction and working of Medical Cyclotron.
4. What is emission computed tomography.
5. Limitations of MIRD Technique.
6. Radio-nuclides produced from the cyclotron and their applications.
7. Explain the term specific absorbed dose fraction and dose Reciprocity theorem.
8. Estimation of Life span of RBC.
9. Gamma ray dosimetry of Internal radioactive isotope.
10. Image display and recording systems used in Nuclear medicine.
