[LM 0518] MAY 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 the working principle, data acquisition and data corrections in Positron Emission Tomography.

2. Discuss in detail about the cumulated activity, equilibrium absorbed dose constant and specific absorbed fraction used in MIRD Technique.

II. Write notes on: **(10 x 6 = 60)**

1. Radio nuclides produced from the nuclear reactor.
2. Principle of radionuclide generator.
3. Thyroid uptake measurements.
4. Radiation Synovectomy.
5. Waste disposal methods in Nuclear medicine.
6. Explain about Renogram.
7. Discuss about the beta dose calculation methods.
8. Basic principle and working of Rectilinear scanner.
9. Thyrotoxicosis.
10. Discuss about the different types of collimators used in nuclear medicine.

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