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

[AHS 0522] **MAY 2022** **Sub. Code: 4014**

M.Sc. (MEDICAL PHYSICS) DEGREE EXAMINATION
FIRST YEAR
(Revised Regulations for Candidates admitted from 2010-2011)
PAPER IV – RADIATION DOSIMETRY AND STANDARDIZATION

Q.P. Code: 284014

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(2 x 20 = 40)**

1. Explain Liquid counter and windowless counting of liquid samples.
2. Manganese sulphate bath system and scintillation detectors.

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

1. Energy flux and fluence.
2. Air Kerma rate constant.
3. Radioactive tracers.
4. Ceric Sulphate dosimeter.
5. Significance of Temperature and Pressure correction.
6. Define solid angle.
7. Optical Density.
8. Reactor produced isotopes and their uses.
9. Limitations of Free air ionisation chambers.
10. IAEA TECDOC1274 - Give a summary of the report.

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