[LP 1019] OCTOBER 2019 **Sub. Code: 4015**

M.Sc. MEDICAL PHYSICS DEGREE EXAMS

FIRST YEAR

PAPER V – RADIATION DETECTORS AND INSTRUMENTATION

Q.P. Code : 284015

Time : Three hours **Maximum : 100 marks**

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

1. Explain in detail the principle and construction of a condenser-type chamber and mention how it can be used to measure radiation dose.

2. State the role of personnel monitoring in radiation protection. Explain with neat diagrams, the description and working of any two personnel monitors.

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

1. GM counter and its application.
2. Optically stimulated luminescence dosimeters.
3. Chemical dosimeter and their role in radiotherapy.
4. Principle of semiconductor detector and their uses.
5. Area gamma monitor.
6. Decoders and encoders.
7. Teledose system.
8. Scintillation detector.
9. Hand and foot monitors and their applications.
10. Solid state nuclear track detector.

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