

[LI 0416]

APRIL 2016

Sub. Code: 4015

**M.Sc., MEDICAL PHYSICS DEGREE EXAMINATION  
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 about the gas filled detectors.
2. a) Explain about the role of personnel monitoring in radiation protection.  
b) Explain about any two personnel monitoring devices in detail.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Single and multichannel analysers.
2. Film densitometers.
3. AC–DC convertors.
4. Radio isotope calibrators.
5. Condensor type chambers.
6. Dead time and recovery time.
7. MOSFET and its application in radiation dosimetry.
8. Principle and working of semiconductor detectors.
9. Radiation Field Analyser.
10. Gamma ray spectrometers.

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