

[LD 1013]

OCTOBER 2013

Sub. Code: 4014

**M.Sc (MEDICAL PHYSICS) DEGREE EXAMINATION**  
**(Revised Regulations for Candidates admitted from 2010-2011)**

**FIRST YEAR**

**PAPER IV – RADIATION DOSIMETRY AND STANDARDIZATION**

*Q.P. Code : 284014*

**Time : 3 hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on :**

**(2X20=40)**

1. Describe in detail about the classification of neutron sources and dosimetry procedures.
2. Compare the external beam calibration protocol of TRS 398 and TRS 277.

**II. Write notes on:**

**(10X6=60)**

1. Ir-192 source standardization.
2. Directional dose equivalent.
3. Burlin and spencer Attix cavity theory.
4. Scintillation detector for neutron.
5. Linear and mass attenuation coefficient.
6. Preparation of radio colloids.
7. Transient charged particle equilibrium.
8. Calibration factor  $N_{d,w}$ .
9. Beam Quality correction
10. Air kerma strength.

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