

[LC 0413]

APRIL 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 : Three hours

Maximum :100marks

I. Elaborate on:

(2x20=40)

1. Describe about Bragg – Gravy cavity theory and derive an expression for the volume of the cavity chamber.
2. Define calibration factors N_x , N_k , $N_{D,air}$, $N_{D,w}$ and quality factor. Explain about cross calibration method.

II. Write notes on :

(10X6=60)

1. W value and G value.
2. Re-entrant ionization chamber.
3. Fricke dosimeter.
4. Define Apparent activity and standardization of HDR Ir-192 source.
5. Types of thermometers and Barometers and method of temperature and pressure correction.
6. Classification of neutron sources based on energy.
7. Compare the protocols of TRS 398 and TG 51.
8. Define particle flux and fluence.
9. Free air ion chamber.
10. Calorimetry.
