(LC 140) **APRIL 2013** **Sub. Code: 2035**

M.D. DEGREE EXAMINATION
BRANCH IX-RADIO THERAPY

MEDICAL RADIATION PHYSICS AS APPLIED TO RADIOTHERAPY AND RADIATION BIOLOGY

Q.P.Code: 202035

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

I. Elaborate on: **(2X15=30)**

1. Describe the interaction of radiation with matter.

2. Describe the four 'R's of Radiobiology.

II. Write notes on: **(10X7=70)**

1. Describe the Wedge filters and its applications.
2. Describe the Characteristics of electrons.
3. Describe the Safety devices in Teletherapy room.
4. Describe the Isocentre mounting with illustration.
5. Describe the Uncertainties in radiation therapy.
6. Describe the role of Simulators treatment planning.
7. Describe the Conformal therapy.
8. Describe the Physical basis of Image guided radiotherapy.
9. Describe the Beam modifying devices.
10. Radiobiological effect.

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