[LS 1517] NOVEMBER 2020 **Sub. Code: 3025**

(OCTOBER 2020 SESSION)

DIPLOMA IN MEDICAL RADIOTHERAPY (DMRT) EXAMINATION

MEDICAL RADIATION PHYSICS AS APPLIED TO RADIOTHERAPY

Q.P. Code: 343025

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Describe the features and working of modern linear accelerator with schematic diagram.

2. Discuss physics in IMRT and clinical applications.

II. Write notes on: **(10 x 7 = 70)**

1. Wedge Filters
2. Define isocentre and isocentric technique in stationary beam and rotational therapy.
3. Describe various volumes as described in ICRU 50 and 62.
4. Describe various methods of simulations in radiotherapy.
5. Treatment planning in electron arc therapy.
6. Write short notes on radioisotopes used in brachytherapy.
7. Implant dosimetry.
8. Short notes on periodic QA in linac.
9. 3DERT
10. Beam collimation and penumbra

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