

QP CODE: 303018

Reg. No.....

**Third Year B.Sc MRT Degree Regular/Supplementary Examinations
April 2026**

Radiation Physics II

Time: 3 Hours

Max Marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays:

(3x10=30)

1. Explain tissue –maximum ratio(TMR) and factors affecting it.
2. Explain in detail about beam direction and beam modifying devices.
3. Treatment machines for External beam Radiotherapy.

Short notes:

(8x5=40)

4. Depth dose curve.
5. PDD.
6. Treatment planning with SSD technique.
7. Types of penumbra.
8. Proton beam treatment.
9. Gamma cameras.
10. Field shaping.
11. Organ at risk.

Answer briefly:

(10x3=30)

12. Importance of immobilization devices.
13. Gross Tumour Volume (GTV).
14. Why is a scattering foil used in a linear accelerator.
15. Types of beam collimation in linac.
16. Shielding blocks.
17. Differences between SRS and SRT.
18. Gated radiotherapy.
19. What is a flattening filter in radiotherapy.
20. Cone beam CT.
21. Biological half life.
