

QP CODE: 303018

Reg. No.....

**Third Year B.Sc MRT Degree Supplementary Examinations
October 2025**

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 isodose curves and the parameters affecting it
2. Explain different volume concepts and advances in modern radiotherapy techniques
3. Isotopes are used in HDR brachytherapy

Short notes:

(8x5=40)

4. Multileaf collimators
5. Customized shielding block
6. What are point A and point B in brachytherapy
7. Virtual simulation
8. Properties of Ir-192 source
9. Wedges
10. Intra cavitory simulation procedure
11. Immobilization devices

Answer briefly:

(10x3=30)

12. Explain why thick target is used in linear accelerator
13. Integral dose
14. Whole body counting
15. Conformal Radiotherapy
16. Dosimetry in brachytherapy
17. CT Simulator
18. Beam direction devices
19. Elution technique in nuclear medicine
20. Recent advances in radiotherapy
21. LDR and HDR
