

Third Year B.Sc MRT Degree Examinations February 2019

Radiotherapy II

Time: 3 Hours

Max Marks: 100

- **Answer all questions**
- **Draw diagrams wherever necessary**

Essays:

(3x10=30)

1. Describe the structure and functioning of a modern linear accelerator. Discuss the difference between a linear accelerator and a tele cobalt machine.
2. Describe the staging and breast conservation radiation treatment of stage II breast cancer.
3. Etiology, pathology, staging, diagnosis and management of Carcinoma Cervix

Short notes:

(8x5=40)

4. Interaction of photons with matter
5. Brachytherapy in Carcinoma Cervix.
6. Radiotherapy techniques of stage I ($T_1N_0M_0$) carcinoma larynx
7. ICRU
8. "Immobilisation devices in Radiotherapy".
9. Personal monitoring devices
10. Dose volume histogram (DVH)
11. Whole brain radiotherapy

Answer briefly:

(10x3=30)

12. Mammogram
13. Multi leaf collimators
14. "oxicities of Head and Neck Radiotherapy.
15. Linear energy transfer (LET) and biologic equivalent dose (BED) and their relationship
16. "Oncological emergency"
17. Iridium 192
18. Half value layer
19. Isocentre in radiotherapy
20. Bolus
21. Spinal cord tolerance
