

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[AHS 1023]

**OCTOBER 2023**

**Sub. Code: 2412**

**M.Sc. RADIOTHERAPY TECHNOLOGY  
SECOND YEAR (From 2020-2021 onwards)  
PAPER II - MANAGEMENT OF MOTION, PATIENT CARE AND DATA IN  
RADIOTHERAPY**

*Q.P. Code: 282412*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail data transfer quality assurance in external beam radiotherapy.
2. Explain gating methods using external and internal markers in detail.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Problems of breathing motion.
2. Data storage.
3. Effect of tumor motion on dose distribution.
4. Scheduling Patient for IMRT, VMAT and gating treatment techniques.
5. Errors encountered in daily use of Record and verification system.
6. Difference between interfraction and intrafraction.
7. Laser guard and Touch guard systems for patient safety.
8. Tumor tracking methods.
9. Active Breathing Control in Radiotherapy.
10. KVCBCT and its use in patient set-up.

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