

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

**[AHS 1023]**

**OCTOBER 2023**

**Sub. Code: 2411**

**M.Sc. RADIOTHERAPY TECHNOLOGY  
SECOND YEAR (From 2020-2021 onwards)  
PAPER I – CLINICAL BIOLOGY, RADIATION TOXICITIES, STEREOTACTIC  
RADIOTHERAPY, RADIOSURGERY, SBRT RADIOTHERAPY**

***Q.P Code: 282411***

**Time: Three hours**

**Maximum: 100 Marks**

**Answer ALL Questions**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Discuss Quality Assurance in SRS, SRT and SBRT.
2. Explain all the 6Rs of Radiobiology.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Direct and indirect action of radiation.
2. Biological Equivalent Dose (BED).
3. Radiobiology of hypo fractionation.
4. Radio sensitivity.
5. Late radiation toxicities of skin.
6. Early reacting tissues.
7. Radiation carcinogenesis.
8. SRS using gamma knife.
9. Discuss oxygen effect.
10. NTCP (Normal Tissue Complication Probability).

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