

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

[AHS 0321]

**MARCH 2021**

**Sub. Code: 4032**

**(OCTOBER 2020 EXAM SESSION)**

**M.Sc. MEDICAL PHYSICS**

**SECOND YEAR (From 2010-2011 onwards)**

**PAPER II – CLINICAL RADIATION BIOLOGY**

*Q.P. Code : 284032*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Radiobiological basis of concurrent Chemotherapy and Radiotherapy.
2. Define Linear Quadratic Model. Write an essay on Models in Radiobiology.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Management of Breast Cancer.
2. Shoulder effect.
3. Method of heating (Hyperthermia).
4. Time Dose Fractionation (TDF).
5. TNM of Oropharyngeal cancers.
6. Re-oxygenation.
7. Cumulative Radiation Effect (CRE).
8. Single and double strand breaks.
9. Radiation Sensitizers.
10. Tumour doubling time.

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