

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

[AHS 1022]

**OCTOBER 2022**

**Sub. Code: 4032**

**M.Sc. MEDICAL PHYSICS**  
**SECOND YEAR (From 2010 – 2011 & 2020-2021 onwards)**  
**PAPER II – CLINICAL RADIATION BIOLOGY**  
*Q.P.Code : 284032*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 10 = 20)**

1. Types of DNA damage and pathways for repair.
2. Discuss in detail about the 5R's in radiobiology.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Law of Bergonie and Tribondeau.
2. Mitotic Cell division.
3. PLD and SLD.
4. Mutation.
5. Radio protector agents.
6. Management of Breast cancer.
7. Hyperthermia.
8. Hyperfractionation.
9. TCP and NTCP.
10. Linear Quadratic model.

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