

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

[AHS 0321]

**MARCH 2021**

**Sub. Code: 2305**

**(OCTOBER 2020 EXAM SESSION)**

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY**

**FIRST YEAR (From 2019-2020 onwards)**

**PAPER V – RADIATION BIOLOGY**

*Q.P. Code : 282305*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. What are the modifying agents and explain how each agent alters the biological effects of ionizing radiation.
2. Explain in detail about the Linear Quadratic Theory.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Molecular Composition of Human body.
2. Human Cell Cycle.
3. Deoxyribonucleic Acid (DNA).
4. Law of Bergonie & Tribondeau.
5. Radiation Effects on DNA.
6. Cell Survival Curve.
7. Radiation Induced Cancers.
8. Linear Energy Transfer (LET) & Relative Biological Effectiveness (RBE).
9. Biological Effects of Radiation.
10. Radiation Effects on Embryo.

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