

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

[AHS 0222]

**FEBRUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 2305

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
FIRST YEAR
(Candidates admitted from 2019-2020 onwards – Paper V)
(Candidates admitted from 2020-2021 onwards – Paper VI)
PAPER V & VI – 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 is the system of Radiation Protection. Explain how the radiation to the occupational worker can be minimized?
2. Explain in detail about the Time, Dose, Fractionation.

II. Write Short Notes on: (10x6 = 60)

1. Radiation Induced Radicals in water.
2. Oxygen Enhancement Ratio (OER).
3. Human Cell Cycle.
4. Tissue Composition of Human body.
5. Law of Bergonie & Tribondeau.
6. Radiation Effects on DNA.
7. Radiation Effects on foetus.
8. Cell Survival Curve.
9. Annual Dose Equivalent Limits.
10. Biodosimetry.

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

[AHS 0522]

MAY 2022

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

[AHS 1022]

OCTOBER 2022

Sub. Code: 2305

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FIRST YEAR

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PAPER V & VI – RADIATION BIOLOGY

Q.P. Code : 282305

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Explain detail about the Time, Dose and Fractionation.
2. Elaborate on biological effects of radiation with cells.

II. Write Short Notes on:

(10x6 = 60)

1. Draw the structure of a cell.
2. NTCP.
3. Law of Bergonie and Tribondeau.
4. Benign and malignant tumours.
5. Radiation sensitizers.
6. Cell survival curves.
7. Point mutations.
8. Cumulative radiation effect.
9. Radiation effects on DNA.
10. Radiation induced radicals in water.
