

QP CODE: 304018

Reg. No.....

**Third Year B.Sc MRT Degree Regular/Supplementary Examinations
April 2023
Radiological Protection and Statutory Aspects**

Time: 3 Hours

Max Marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays:

(3x10=30)

1. Describe the radiation protection measures in a Diagnostic Radiology Department
2. Explain in detail about chromosomal aberrations
3. Explain in detail about radiation emergencies in teletherapy and brachytherapy

Short notes:

(8x5=40)

4. Annual effective dose limits as prescribed by the Atomic Energy Regulatory Board (AERB) for radiation worker, members of the public, pregnant radiation worker.
5. Write steps taken during spillage of Radioiodine
6. Inverse square law - explain with an example.
7. Stochastic effect and deterministic effect
8. Dose Area Product (DAP)
9. Chemical dosimeters
10. Radiation weighting factor and tissue weighting factor
11. Safety measures required during source transfer in radiotherapy

Answer briefly:

(10x3=30)

12. Organogenesis.
13. Internal exposure.
14. TLD Badge
15. Survey meter
16. What is the relationship between time and exposure
17. Annual Limit of Intake (ALI)
18. Stochastic effect
19. Oxygen Enhancement Ratio (OER).
20. Simple target theory
21. Lethal dose 50 (LD 50)
