

QP CODE: 304018

Reg. No.....

**Third Year B.Sc MRT Degree Supplementary Examinations
August 2018**

Radiological Protection and Statutory Aspects

Time: 3 Hours

Max Marks: 100

- **Answer all questions**
- **Draw diagrams wherever necessary**

Essays:

(3x10=30)

1. Explain the effects of radiation on embryo and foetus and are they hereditary effects.
2. Explain four principles of radiation protection and importance of ALARA principle.
3. Explain in detail about radiation emergencies in teletherapy and brachytherapy

Short notes:

(8x5=40)

4. Stochastic effect and deterministic effect.
5. Type A and type B Packages.
6. The level of exposure in the working area is 2mR/hr. How long one should permit to work/day without exceeding the weekly permissible dose.
7. Primary and secondary barrier.
8. Presence of oxygen alters the dose response.
9. Importance QA in LINAC.
10. Waste management in nuclear medicine.
11. Area monitor.

Answer briefly:

(10x3=30)

12. Average natural background radiation level in India and which part of India has the highest natural background radiation.
13. Annual limit of intake (ALI)
14. Therapeutic ratio.
15. RMM
16. KERMA
17. GM counter.
18. Protective material used in diagnostic radiology.
19. Late effects of radiation.
20. Tremcard and its importance in transport of radioactive material.
21. Somatic effects of radiation.
