

QP Code: 108391

Reg. No.....

**Post M.Sc Diploma in Radiological Physics Regular/Supplementary
Examinations October 2024**

Radiation Safety

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*
- *Use of Calculators/physical and mathematical tables permitted.*

Essay:

(2x14=28)

1. What safety measures to take while planning for Medical linear accelerator installation and commissioning.
Is treatment room planning coming under radiation safety. If yes/No justify with few lines. Do we have any alternative for concrete to construct the Linear accelerator rooms. If yes/ No justify with few lines.
2. Explain Nuclear Medicine department function end to end with neat sketch of PET-CT facility.
What are the safety measures that we take in NM department at various type of accidents.

Short Essays

(4x8=32)

3. Write ICRU recommendation on dose limits to radiation workers and Public.
4. Why dose constraints are important.
5. Explain in detail on effects of distance, time, and shield on dose to personal with formulas.
6. What actions you take If HDR source fails to retrieve.

Short Notes

(10x4=40)

7. Define Effective dose
8. Define ALARA
9. Mention general methods of radioactive waste disposal
10. Why labeling is required on radiation source containers
11. Employer responsibilities
12. Applications of Radiographic cameras
13. Please give few examples of Radiation Emergencies
14. Who is consigner and who is consignee
15. Why we use TLD in Radiation departments.
16. Why Teletherapy room designs are fixed
