

**Post M.Sc Diploma in Radiological Physics Examinations
October 2018**

Radiation Safety

Time: 3 hours

Max. Marks: 100

- Answer all questions
- Use of Calculators/physical and mathematical tables permitted.

Essay: (2x14=28)

1. Briefly explain the system of dose limitation recommended by ICRP. Explain ALARA principle (9+5)
2. What are the responsibilities of a radiological safety officer in radiation oncology department. What is the reason behind the special design of all radiation facilities. (9+5)

Short Essays (4x8=32)

3. What factors involved in shielding calculations. Explain each in brief.
4. What is transport index and how it is determined? Explain various categories of packages based on transport index.
5. Draw a flow diagram of basic nuclear medicine department.
6. Classify the waste disposal and their techniques

Short Notes (10x4=40)

7. Meaning of radiation accident.
8. What is inventory and log book in RT department.
9. Define consignee and consignor.
10. Labeling of transport material.
11. Annual dose limits to public and radiation workers.
12. What is radiation hazard.
13. Examples of radioactive wastes in medicine and industry.
14. What is neutron flux.
15. TLD and its use
16. Mention few equipment used in radiation safety.
