

QP Code: 107391

Reg. No.....

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

Radiation Therapy

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. Write step by step procedure of Electron Output calibration by TRS 398.
How much % of output will change on changing the temperature from 22 degrees to 25 degrees.
2. Describe • Low KV therapy • Cobalt Therapy in detail.

Short Essays (4x8=32)

3. Define TAR, TMR, PDD and TPR.
4. Describe Radiation Field Analyzer.
5. Write calibration of High dose rate brachytherapy source.
6. Write few features of treatment planning system.

Short Notes (10x4=40)

7. What is IGRT and what is its advantage
8. What is the difference between IMRT and 3DCRT
9. What is 4DCT.
10. Explain SRS procedure and its use.
11. Specify various kinds of immobilizations.
12. Write a procedure to prepare mould.
13. What is DICOM and list two advantages of this.
14. Explain Portal dosimetry.
15. Write short notes on neutron capture therapy
16. Define wedge. Mention various kinds of wedges.
