

QP Code: 107391

Reg. No.....

**Post M.Sc Diploma in Radiological Physics Examination
January 2018**

Radiation Therapy

Time: 3 hours

Maximum Marks: 100

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

Essay:

(2x14 = 28)

1. Explain in detail advantages and disadvantages of manual and remote after loading techniques. Explain the calibration of HDR source with formula. (9+5)
2. Explain the treatment procedure of IMRT in detail. What are various gating techniques. What is its advantage. (9+5)

Short Essays

(4x8=32)

3. Why we use shielding
4. Explain the spectral distribution of KV X-rays.
5. What is the advantage of electron beams.
6. What is virtual simulation

Short Notes

(10x4=40)

7. Compensators.
8. Integral dose.
9. ARC therapy.
10. Heavy ion therapy.
11. Portal dosimetry.
12. DICOM images.
13. Cyber knife
14. 4DCT
15. Tomo therapy
16. 3DCRT
