

QP CODE: 303018

Reg. No.....

Third Year B.Sc MRT Degree Examinations March 2018

RADIATION PHYSICS II

Time: 3 Hours

Max Marks: 100

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

Essays:

(3x10=30)

1. Define and enumerate the factors affecting PDD.
2. Explain TMR and TPR.
3. Explain klystron and magnetron - its merits and demerits

Short notes:

(8x5=40)

4. IGRT
5. Customized shielding block
6. Cyclotron
7. Source strength verification for HDR Ir-192 source
8. TBI.
9. Wedges
10. Beam direction devices
11. Immobilization devices

Answer briefly:

(10x3=30)

12. Draw a PDD curve for 6 Mev and 12 Mev electrons and compare.
13. Properties of caesium.
14. A 6 MV linac with 1cGy per MU with PDD 66.7% for 10x10cm² at 10cm depth
Sc=1 and Sp=1. Determine the MU values to deliver 250cGy.
15. Electronic portal imaging device (EPID)
16. Beam collimation.
17. Flattening filter
18. Penumbra
19. ITV
20. Parallel opposed field
21. Cone beam CT.
