

QP CODE: 201018

Reg.No.....

Second Year B.Sc MRT Degree Examinations February 2017

RADIATION PHYSICS I

Time: 3 Hours

Total Marks:100

- **Answer all questions**

Essays: (3x10=30)

1. Describe the structure and functioning of a modern linear accelerator. Discuss the difference between a linear accelerator and a telecobalt machine.
2. Describe the different types of interaction of ionizing radiation with matter. Mention the applications of these interactions in medical imaging and radiation oncology
3. Describe the principles of CT scan machine and enumerate the different generations of CT scan machine.

Short notes: (8x5=40)

4. Multi slice CT scan machines
5. Digital subtraction angiography
6. Cross section of X Ray film
7. Digital radiography
8. X Ray Production.
9. Different radiation quantities and its units
10. Speed of a film
11. CT simulator

Answer briefly: (10x3=30)

12. Xero radiography
13. Particle beam radiation
14. Cathode ray tube
15. Image intensifier
16. Mammography
17. HVL
18. Film gamma
19. Tomography
20. Grid
21. Hooded anode tube.
