

QP CODE: 201018

Reg. No.....

**Second Year B.Sc MRT Degree Supplementary Examinations
October 2021**

Radiation Physics I

Time: 3 Hours

Total 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*

Essays:

(3x10=30)

1. Explain about the use of grids in diagnostic imaging. How grid performance is evaluated and what are the various types of grid cut-off
2. Explain in detail about the various imaging techniques used in dental radiography
3. With the help of a circuit diagram explain the operation of an X ray circuit

Short notes:

(8x5=40)

4. Methods to improve the quality of radiographic image
5. CT X ray tubes and Mammography X ray tubes
6. Proportional counter
7. Compton effect
8. Inherent and added filtration
9. Continuous and characteristic X rays
10. Film characteristic curve
11. Scintillation detector

Answer briefly:

(10x3=30)

12. Photoelectric effect
13. Exposure
14. X ray spectrum
15. Fluorescence and phosphorescence
16. Linear Accelerator
17. Anode heel effect
18. Thermionic emission
19. Line focus principle
20. Half value layer
21. Half wave rectifier
