

QP CODE: 201018

Reg. No.....

**Second Year B.Sc MRT Degree Supplementary Examinations
October 2022**

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 the different interactions of ionising radiation with matter.
2. What are the different types of X-ray tubes used in medical applications.
3. What are the characteristics of radiographic image. Describe the methods.
to improve image quality

Short notes:

(8x5=40)

4. Free air Ionisation Chamber
5. Fluorescence and its uses
6. Transformers in X-ray circuit
7. Spiral Computerised Tomography(CT)
8. Geiger Muller (GM)detector
9. Image Intensifier
10. Automatic film processing
11. Dental X-ray

Answer briefly:

(10x3=30)

12. Kerma
13. Intensifying screens
14. Flat panel detectors
15. Full wave rectification
16. Characteristic X-rays
17. Hurter & Driffield (H&D) Curve for Film
18. Laser
19. Hounsfield Unit
20. Grenacher Circuit
21. Heel Effect
