

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Medical Imaging Technology Degree Examination – 23-May-2025

Time: Three Hours

Max. Marks: 100 Marks

Radiation Physics: Medical Physics and Radiation Safety in Radio Diagnosis (RS-4) Q.P. CODE: 3290

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice)

2 x 10 = 20 Marks

1. Explain about production of x-rays? Explain properties of x-ray.
 2. Explain in detail anti-scatter grid in follow in headings:
a) Construction b) Working c) Type d) Grid ratio e) Errors f) Advantages and disadvantages
- OR**
- Explain about a) Main voltage compensators b) Filament circuit c) Control of tube current

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. Space charge effect.
 4. Filters.
 5. Radioactivity.
- OR**
- Space charge compensator.
6. Scintillation detector.
 7. TLD.
 8. Transformer.
 9. Beam centring device.
 10. Grids.
- OR**
- Fluoroscopy
11. Line focus principle
 12. 3-phase circuits.

SHORT ANSWER

10 x 3 = 30 Marks

13. Self rectifiers.
14. Tube rating chart.
15. Film badges.
16. Collimators.
17. Characteristic spectrum.
18. Atoms.
19. Vacuum diode.
20. Circuit breakers.
21. Exponential attenuation.
22. Define half life and mean life.
