

Rajiv Gandhi University of Health Sciences, Karnataka
III Year B.Sc. (M.I.T) Degree Examination – 22-Nov-2024

Time: Three Hours

Max. Marks: 100 Marks

Diagnostic Imaging Techniques and Modalities (RS-4)

Q.P. CODE: 3293

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 digital subtraction angiographic (DSA) technique in detail.
2. Explain the gradient Echo pulse sequences.

OR

Elaborate about the Doppler principle and types of Doppler instrumentation.

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. Note on isotope calibrator.
 4. Time of flight phenomena and compensation.
 5. HRCT temporal bone protocol.
- OR**
6. Explain ring artifact and partial volume artifact in CT and its remedies.
 7. Procedure for gastric emptying scintigraphy.
 8. Explain direct and indirect digital radiography.
 9. Write a note on K-space filling and types.
 10. Explain the parameters affecting contrast to Noise ratio (CNR) in MRI.

OR

- Note on Echo planar imaging (EPI).
11. B-mode and M-mode in ultrasound.
 12. MRI – cervical spine protocol.

SHORT ANSWER

10 x 3 = 30 Marks

13. Note on timing parameters in MRI.
14. Explain the methods of disposal of radioactive waste materials.
15. Draw a neat labelled diagram of the mammography equipment.
16. Cross excitation and cross talk artifacts in MRI.
17. Patient preparation for cardiac MRI.
18. Explain a) Window level b) CT number c) Pixel
19. Draw a neat labelled diagram of transducer.
20. Wipe testing in Nuclear medicine departments.
21. I I T V
22. Scintillation detector in CT.
