Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Imaging Technology Examination – 16-May-2023

Time: Three Hours | Max. Marks: 60 Marks

DIAGNOSTIC IMAGING TECHNIQUE (RS3)

Q.P. CODE: 2911

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

LONG ESSAYS (Answer any Two) — 2 x 10 = 20 Marks

1. Write briefly Doppler basic principles with neat diagram.
2. Describe pulse sequences used in MRI.
3. Describe in detail construction and working of gamma camera with neat diagram.

SHORT ESSAYS (Answer any Five) — 5 x 5 = 25 Marks

4. Shim coils and gradient coil
5. Image reconstruction techniques in CT
6. Different modes of ultrasound
7. CT artefacts
8. SPECT
9. Transducer
10. M R contrast agents

SHORT ANSWERS (Answer any Five) — 5 x 3 = 15 Marks

11. Patient preparation in ultrasound
12. Larmor's frequency
13. Doppler artefacts
14. Magnetic quench
15. Ultrasound contrast agents
16. Window width and window level
17. Resistive index

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Imaging Technology Examination – 18-May-2023

Time: 3 Hours Max. Marks: 30 Marks

RADIOGRAPHIC TECHNIQUES – I (RS3)

Q.P. Code: 2912

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

(Note: Both QP Codes 2912 and 2913 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Explain various projections for rib fracture and sternal fracture.
2. What are the supplementary projections for greater and lesser trochanter of femur?

SHORT ESSAYS (Answer any Two) 2 x 5 = 10 Marks

3. Intra oral and extra oral projections
4. Radiographic views for scaphoid
5. Towne's view

SHORT ANSWERS (Answer any Five) 5 x 2 = 10 Marks

6. Special views for knee joint
7. Y – projection for scapula
8. Views for sternum
9. Decubitus view for chest
10. Submento vertical view
11. Lordotic view

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (M.I.T) Degree Examination – 16-May-2023

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 the generations of computed tomography.
2. MRI safety.
   OR
   Construction of transducer.

SHORT ESSAYS (Question No 5 & 10 choice) 10 x 5 = 50 Marks

3. Radiopharmaceuticals.
4. Slip ring technology.
5. FLAIR sequence
   OR
   Modes of display in USG.
6. Discuss the MRI artefacts.
7. Cardiac CT.
8. Define SNR and discuss the factors affecting the SNR.
9. A patient with history of acute onset right sided weakness came for MRI.
10. Explain the principles of IV contrast **BOLOUS** tracking with appropriate diagram.
    OR
    DATA Acquistion in CT
11. Write about the patient preparations of CT scan.
12. Radioactivity.

SHORT ANSWER 10 x 3 = 30 Marks

13. Quenching.
14. Voxel and pixel.
15. Linear attenuation coefficient.
16. Frequency and wave length of ultrasound.
17. Precession and precessional frequency.
18. Resolution and contrast.
19. **HOUNS** field unit.
20. DWI
21. T1 and T2 weighted sequence.
22. USG coupling agent.

Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Medical Imaging Technology Degree Examination

– 18-May-2023

Time: Three Hours Max. Marks: 100 Marks

Radiographic Special Procedures and Patient care (RS-4)

Q.P. CODE: 3294

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. Describe lumbar myelography under the following headings
   a) Indication and contraindication
   b) Procedures including recommended views
   c) Aftercare of the patient

2. Describe in detail about barium meal follow through

   OR

   Describe in detail about IVU – procedure.

SHORT ESSAYS (Question No 5 & 10 choice) 10 x 5 = 50 Marks

3. ERCP
4. Contrast media
5. **Barium Swallow**

   Or

   Hypotonic Duodenography
6. **HSG**
7. **Sialography**
8. **PTBD**
9. T-tube cholangiography
10. **Patient care during investigation of G.I. Tract.**

    Or

    Phlebography
11. Guide wires and types
12. **MCU**

SHORT ANSWER 10 x 3 = 30 Marks

13. Difference between diagnostic and therapeutic procedures.
14. Indication and contraindication for barium enema.
15. Seldinger technique
16. Radiation safety of the patient attender during radiological procedures.
17. First aid in the radiology department.
18. Foleys catheter
19. Contrast media used in USG.
20. Complications and after care of ascending cystourethrogram.
21. Informed consent.
22. Preoral pneumocolon.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Imaging Technology Examination – 18-May-2023

Time: 3 Hours | Max. Marks: 30 Marks

RADIOGRAPHIC TECHNIQUES – II (RS3)

Q.P. Code: 2913

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

(Note: Both QP Codes 2912 and 2913 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) — 1 x 10 = 10 Marks

1. Describe in detail about myelogram.
2. Describe about hysterosalpingography.

SHORT ESSAYS (Answer any Two) — 2 x 5 = 10 Marks

3. Emergency drugs
4. Write briefly on mammography.
5. Small bowel enema

SHORT ANSWERS (Answer any Five) — 5 x 2 = 10 Marks

6. Barium enema
7. Portable radiography
8. Bronchography
9. Preparation of barium sulfate solutions
10. Ventriculography
11. Asepsis