Rajiv Gandhi University of Health Sciences, Karnataka

I Year M. Sc Medical Imaging Technology Degree Examination - 09-May-2025

Time: 3 Hours Max. Marks: 80

ADVANCED TECHNIQUE AND INSTRUMENTATION OF ULTRASONOGRAPHY

Q.P. CODE: 9543

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

Answer All The Questions 8 X 10 = 80 Marks

1. Explain ultrasound instrumentation and scan converter
2. Quality assurance tests for ultrasound and doppler imaging
3. Focused Assessment with Sonography for Trauma (FAST)
4. Role of ultrasound in interventional procedures
5. Harmonic imaging and extended field of view
6. Doppler spectral analysis and display
7. Thermal and mechanical index
8. Elastography

I Year M.Sc. Medical Imaging Technology Degree Examination_- 12-May-2025

[Time: 3 Hours] [Max. Marks: 80]

Advanced Technique and Instrumentation of Computed Tomography

Q.P. CODE: 9544

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

Answer All The Questions 08 X 10 = 80 Marks

1. Describe in detail about CT artifacts.
2. Various pre and post processing of CT scan.
3. Image formation of CT scan.
4. Myocardial imaging.
5. Care and maintenance of CT.
6. Calcium scoring.
7. Slip ring technology.
8. CT guided interventional procedures.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year M.Sc. Medical Imaging Technology Degree Examination - 14-May-2025

[Time: 3 Hours] [Max. Marks: 80]

Radiographic Procedure and Principles of Radiographic Exposure
Q.P. CODE: 9541

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

Answer All The Questions 08 X 10 = 80 Marks

1. Discuss the indications, contraindications and technique of MCU.
2. Discuss the various factors affecting radiographic Image quality
3. Discuss the various radiographic projections for the skull.
4. Characteristic curve.
5. Radiographic projections of hip joint.
6. Discuss contrast media reactions.
7. Barium meal follow through.
8. What is T-Tube cholangiography? Discuss technique and list the indications.

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I Year M.Sc Medical Imaging Technology Degree Examination - 16-May-2025

Time: 3 Hours Max. Marks: 80

INSTRUMENTATION OF CONVENTIONAL X-RAY EQUIPMENTS AND INSTRUMENTATION OF SPECIALIZED RADIOLOGY EQUIPMENTS
Q.P. CODE: 9542

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

Answer All The Questions 08 X 10 = 80 Marks

1. What is generator? Explain different types of generators in detail.
2. Main voltage compensation.
3. Safety rules of radiographers.
4. Write a note on various types of tomographic movement.
5. Spot film device.
6. Discuss about exposure timers.
7. Write a note digital fluoroscopy.
8. Tube rating.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year M.Sc Medical Imaging Technology Degree Examination - 24-Oct-2025

Time: 3 Hours Max. Marks: 80

RADIOGRAPHIC PROCEDURE AND PRINCIPLES OF RADIOGRAPHIC EXPOSURE
Q.P. CODE: 9541

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

Answer All The Questions 08 X 10 = 80 Marks

1. Define Micro and Macro radiography. Explain the geometry of a radiographic image
2. Write a note on the anatomy of Genito Urinary Tract (GUT) and explain the contrast media in MRI for GUT studies
3. Write a note on automatic film processor and the accessory devices used in the darkroom
4. Explain pelvimetry in detail and write a note on supplementary views of the pelvis
5. Differentiate between Retrograde Urethrography (RGU) and Intravenous Pyelography (IVP)
6. Explain photographic latent images and the laws related to it
7. Explain the production of X-ray in detail and management of radiographic image quality
8. Explain role of radiology in female infertility

I Year M.Sc Medical Imaging Technology Degree Examination - 27-Oct-2025

Time: 3 Hours Max. Marks: 80

INSTRUMENTATION OF CONVENTIONAL X-RAY EQUIPMENTS AND INSTRUMENTATION OF SPECIALIZED RADIOLOGY EQUIPMENTS
Q.P. CODE: 9542

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

Answer All The Questions 8 X 10 = 80 Marks

1. Explain the importance of poly phase system in comparison with single phase supply in the production of X-ray and add a note on current loads and power loss
2. Write a note on safety devices used in diagnostic radiology with diagram
3. Explain the rating charts for X-Ray tube
4. Among the thermal relay and magnetic relay which device provides better safety. Justify your answer by explaining the working mechanism
5. Classify filters and explain the working mechanism of filters with diagram
6. List out and explain the equipment's which are specifically used only in mobile X-Ray unit in comparison with CR system
7. List out the general features of fluoroscopy table and explain serial changers in detail
8. Quality assurance in diagnostic radiology

Rajiv Gandhi University of Health Sciences, Karnataka

I Year M. Sc Medical Imaging Technology Degree Examination - 29-Oct-2025

Time: 3 Hours Max. Marks: 80

ADVANCED TECHNIQUE AND INSTRUMENTATION OF ULTRASONOGRAPHY

Q.P. CODE: 9543

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

Answer All The Questions 8 X 10 = 80 Marks

1. Characteristics of ultrasound and explain in detail about the interaction with matter
2. Explain in detail about advances in the design of modern ultrasound transducers
3. Spectral analysis in doppler
4. Interventional ultrasound
5. Extended field of view imaging and its application
6. Explain in detail about lower limb venous doppler
7. Breast imaging protocol
8. Describe the Pre and Post processing techniques of USG

I Year M.Sc. Medical Imaging Technology Degree Examination - 31-Oct-2025

[Time: 3 Hours] [Max. Marks: 80]

Advanced Technique and Instrumentation of Computed Tomography

Q.P. CODE: 9544

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

Answer All The Questions 08 X 10 = 80 Marks

1. Instrumentation of CT and advances in multislice CT.
2. Discuss about cardiac CT angiography.
3. Discuss about High Resolution CT and briefly about HRCT lung.
4. Contrast reactions in CT, protocol for management.
5. 3D and MPR.
6. CT perfusion in acute stroke.
7. Liver CT protocol.
8. Care and quality assurance in CT.