Rajiv Gandhi University of Health Sciences, Karnataka

II Year M. Sc Medical Imaging Technology - 29-May-2024

Advanced Technique and Instrumentation of MRI

Q.P. CODE: 9545

advanced technique and instrumentation of MRI [9545]

Marks: 80 Duration: 200 mins.

Advanced Technique and Instrumentation of MRI

Answer all the questions.

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

Answer All The Questions

1 Explain functional MRI and its types (10)

2 Name the inversion recovery sequences and write in detail about theprinciples and application of them (10)

3 Write a short note on gradient echo sequences (10)

4 Describe the physical theory and procedure for doing MRspectroscopy on brain (10)

5 Write a note on cardiac gating and its importance (10)

6 Describe the protocol for MR Cholangiopancreatography (10)

7 Write a brief note on configuration and selection of RF coil forimaging of small anatomy (10)

8 Explain diffusion weighted imaging and its applications (10)

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II Year M. Sc Medical Imaging Technology - 04JUN2024

INTERVENTIONAL RADIOLOGY TECHNIQUES

Q.P. CODE: 9546

Interventional Radiology techniques [9546]

Marks: 80 Duration: 200 mins.

INTERVENTIONAL RADIOLOGY TECHNIQUES

Answer all the questions.

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

Answer All The Questions

1 **Role Radiographer in interventional procedure.**. (10)

2 Mention and explain basic principles of sterile technique. (10)

3 Ultrasound guided liver abscess drainage. (10)

4 **Explain angiographic room design and radiation protective measures employed.**. (10)

5 Co_2 angiography. (10)

6 Explain uterine artery embolization. (10)

7 Fallopian tube recanalization. (10)

8 Intravascular stents. (10)

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II Year M. Sc Medical Imaging Technology 10JUN24

RADIATION EVALUATION AND PROTECTION IN DIAGNOSTIC RADIOLOGY
Q.P. CODE: 9548
Radiation Evaluation and protection in diagnostic radiology [9548]
Marks: 80 Duration: 200 mins.
RADIATION EVALUATION AND PROTECTION IN DIAGNOSTIC
Answer all the questions.
Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.
Answer All The Questions

1 Write about beam limiting devices. (10)

2 Write about the x-ray room construction for mammography. (10)

3 Explain ALARA principle and its regulation. (10)

4 Explain the deterministic effect and stochastic effect ofradiation-somatic and genetic effect. (10)

5 Write the absorbed dose and absorbed dose equivalent. (10)

6 Discuss various radiation personal monitoring devices. (10)

7 Ionization chamber and application and limits. (10)

8 Discuss in detail about radiation safety in diagnostic radiology. (10)

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II Year M. Sc Medical Imaging Technology – 12-June-2024

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

NUCLEAR MEDICINE IMAGING TECHNIQUES
Q.P. CODE: 9549
Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions 08 X 10 = 80 Marks

Q1. Discuss in detail with diagram positron Emission Tomography. (10)

Q2. Discuss in detail thyroid scan. (10)

Q3. Describe in detail Accelerator produced radionuclides. (10)

Q4. Discuss briefly disposal of radioactive waste. Add a note on wipe test. (10)

Q5. Explain in detail the modes of radioactive decay. (10)

Q6. Discuss in detail factors affecting gamma camera image quality. (10)

Q7. Units of radiation measurements. (10)

Q8. Cold kit. (10)