

M.Sc Semester-4 Examination

509

Medical Physics

April-2024

Time : 2-30 Hours]

[Max. Marks : 70

Q.1 What is projection radiography? Explain the limitations of projection radiography. [14]

OR

Q.1 How scatter components can be reduced explain all the techniques. [14]

Q.2 Explain in detail the components of Computed Tomography. [14]

OR

Q.2 Explain in detail the components of Mammography units.. [14]

Q.3 Write a note on grids. On what basis can we evaluate the performance of grids? [14]

OR

Q.3 Explain the components of a radiographic film. On what factors film contrast is dependent, explain any two of them. [14]

Q.4 Give a brief account on QA in Diagnostic Radiology [14]

OR

Q.4 Explain in detail the basic imaging concepts in Ultrasound. [14]

Q.5 Attempt any seven out of twelve from the following (Each question is of two marks): [14]

(i) Why are barium and iodine used as contrast agent?

- (ii) Define subject contrast?
- (iii) Write any two factor that determine the attenuation when x ray passes through matter.
- (iv) What is digital radiography.
- (v) What are the three main components of image intensifier.
- (vi) What is the difference between helical and multislice scanners.
- (vii) What is inherent and added filtration?
- (viii) What do we mean by resolving power?
- (ix) What is photographic density?
- (x) Describe about the QA of CT equipment.
- (xi) What are the safety precautions for MRI
- (xii) Describe about the principle of MRI

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