



B.Sc. Imaging Technology Third Year (Semester-V)

September-2023 Examination

Time: 2.30 Hrs.

Paper-II

[Max. Marks: 80]

Sub: Physics of CT & Imaging Techniques

Q.P Code: J5420

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

- 1 Enumerate in detail about generations of CT scan with advantages & disadvantages.
- 2 Explain in detail about the AERB guideline to CT machine installation with neat diagram

SHORT ESSAY (Answer any six)

6 X 5 = 30 Marks

- 3 Write short notes on beam hardening artifact
- 4 What is Matrix? Explain about Pixel & Voxel?
- 5 CT Fluoroscopy
- 6 Describe 3D Reconstruction in CT.
- 7 What are the factors affecting image quality in CT?
- 8 CT guided biopsy.
- 9 Classify artifacts on CT
- 10 CT image reconstruction

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

- 11 What is MPR & VR? And its uses
- 12 Name the phases in abdominal CECT & Purpose
- 13 What is quantum mottle and how do we reduce it?
- 14 What is advantage of spiral CT?
- 15 Iodinated contrast in CT.
- 16 What is effective dose?
- 17 Write indications for CECT KUB?
- 18 What is the basic principle of CT?
- 19 What type of target material used in CT?
- 20 What is photon starvation artifact in CT scan?
- 21 What is helical CT scanner?
- 22 Aliasing on CT ?

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