

1843 – RADIOGRAPHY EQUIPMENTS, MAINTENANCE AND QUALITY CONTROL RELATED TO X-RAY ONLY

UNIT 5

SUB TOPIC – 9 COMPUTED TOMOGRAPHY

I. Elaborate on

10 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference	Bloom's Taxonomy
1	Describe with neat diagram, various generations of computed tomography.	August 2019	Analyze
2	Describe in detail, various parts of CT equipment.	March 2021	Analyze
3	Write in detail about the developments in CT technology.	November 2022	Analyze
4	Describe in detail, the principle of image formation in Computed Tomography.	April 2023	Analyze
5	Explain the generation of CT.	April 2024	Analyze
6	Write in detail about Computed Tomography- Basic physics – Tomography principle - detectors technology-digital fundamentals- Basic data acquisition concepts -Scanning principle - basics of plain studies- Image reconstruction- artifacts- contrast studies,-special procedures – image quality-storing the image – viewing the image – evaluation of the image- Equipment for computed tomography – Table, scanning gantry X-Ray generator – CT control console. Scanner types - technologic considerations of sequential /spiral volume zoom -computer hard wire of software– CT computer and image processing system- Options and accessories for CT systems.- Tools for use in CT guided Interventional procedures-Dosimetry- Future developments.	-	Analyze

II. Write notes on

5 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference	Bloom's Taxonomy
1	Spiral CT.	April 2022	Understand
2	Image reconstruction in CT.	March 2021	Understand
3	Image reconstruction in CT scanner.	November 2023	Understand
4	Image processing and storage in CT.	April 2024	Understand

III. WRITE SHORT NOTES ON

3 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference	Bloom's Taxonomy
1	CT detectors.	August 2019	Remember
2	CT number.	August 2019	Remember

3	Xenon gas detector.	February 2020	Remember
4	First Generation CT.	March 2021	Remember
5	Two artifacts commonly seen in CT images.	April 2022	Remember
6	Motion artifact and ring artifact.	April 2024	Remember
7	CT dose index.	November 2023	Remember
8	Hounsfield Unit.	November 2023	Remember

SUB TOPIC – 10 ANGIOGRAPHY

I. Elaborate on

10 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference	Bloom's Taxonomy
1	Write in detail about Angiography Equipments- Basic physics and principle of image acquisition- conventional angio- DSA-Cardiac Cath lab. Equipments- advantages-limitations – Dosimetry – Maintenance.	-	Analyze

II. Write notes on

5 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference	Bloom's Taxonomy
1	Principle of Angiography.	November 2022	Understand
2	Digital Subtraction Angiography.	April 2022	Understand
3	Digital Subtraction Angiography.	April 2024	Understand

III. WRITE SHORT NOTES ON

3 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference	Bloom's Taxonomy
1	Advantages of PACS.	February 2020	Remember
2	Write down the advantages of DSA.	November 2023	Remember
3	Write any two points about the maintenance of cath lab equipments.	November 2022	Remember