



SNS COLLEGE OF ALLIED HEALTH SCIENCES COIMBATORE –35
(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai)
B. Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
2024 BATCH
INTERNAL EXAMINATION – I
(20.12.2024)



**PAPER III – RADIOGRAPHY EQUIPMENTS, MAINTENANCE AND
QUALITY CONTROL RELATED TO X-RAY ONLY**

Q.P. Code : 801843

Year: First Year

Time: 2 hours

Maximum: 50 marks

Answer all the questions

I. Elaborate on

2 x 10 = 20

1. Describe with neat diagram, the construction and working of rotating anode x-ray tube.
2. Explain the properties of X-rays. Explain construction of X-ray tube.

II. Write notes on

3 x 5 = 15

1. Construction of stationary anode X-ray tube
2. Grid controlled x-ray tube.
3. Write any 5 properties of X-rays.

III. Short answers on

5 x 3 = 15

1. Portable X-ray machine.
2. Anode heel effect.
3. Capacitor discharge x-ray tube.
4. Line focus principle.

5. Competitive Exam MCQ's :

3 x 1 = 3

- i) (AIIMS Paramedical 2019) The Coolidge tube, used in lower extremity radiography, relies on thermionic emission from: a) Cold cathode b) Heated tungsten filament c) Gas ionization d) Photoelectric effect
- ii) (NEET PG 2022) The space charge effect in X-ray tubes during tibia imaging is minimized by: a) Increasing kVp b) Heating the filament c) Reducing mA d) Angling the anode
- iii) (AIIMS Paramedical 2022) Thermionic emission in cathode assembly for hip radiography requires filament temperature of approximately: a) 500°C b) 1000°C c) 2200°C d) 3000°C