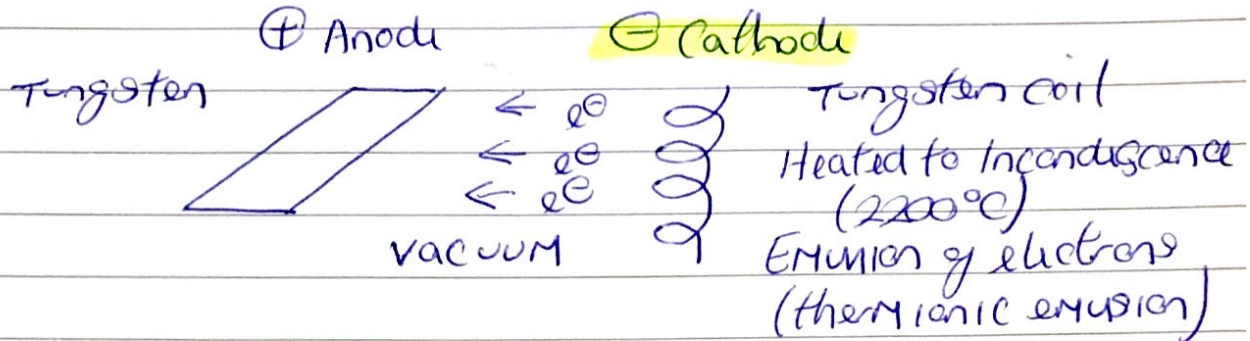


IMAGING

XRAY A form of high energy electromagnetic radiation with a shorter wave length than light



Electrons hit anode, 3 fates: Interact with:

- Outer electrons of nucleus $\rightarrow$ generates heat
- Inner electrons, knocking them out of orbit causing x-rays
- Nucleus causing x-rays to slow down & Δ direction resulting in emission of xray from **braking radiation** (80%) xray generation

Narrow opening to allow escape of xray beam
xray beam passes through body, differentially absorbed
Film detector

Conventional SFR

Digital

Fluoroscopy x-rays converted into visible light
original difference was that fluoro provided moving images

Cassette

Silver iodobromide

Polyester

Lead

20mSv/yr

Back ground 0.01mSv/day

CXR 0.1

CT 1.5

Lead apron 0.5mm

2M from C-arm Mini C-arm 1M