

Glass envelope & Base

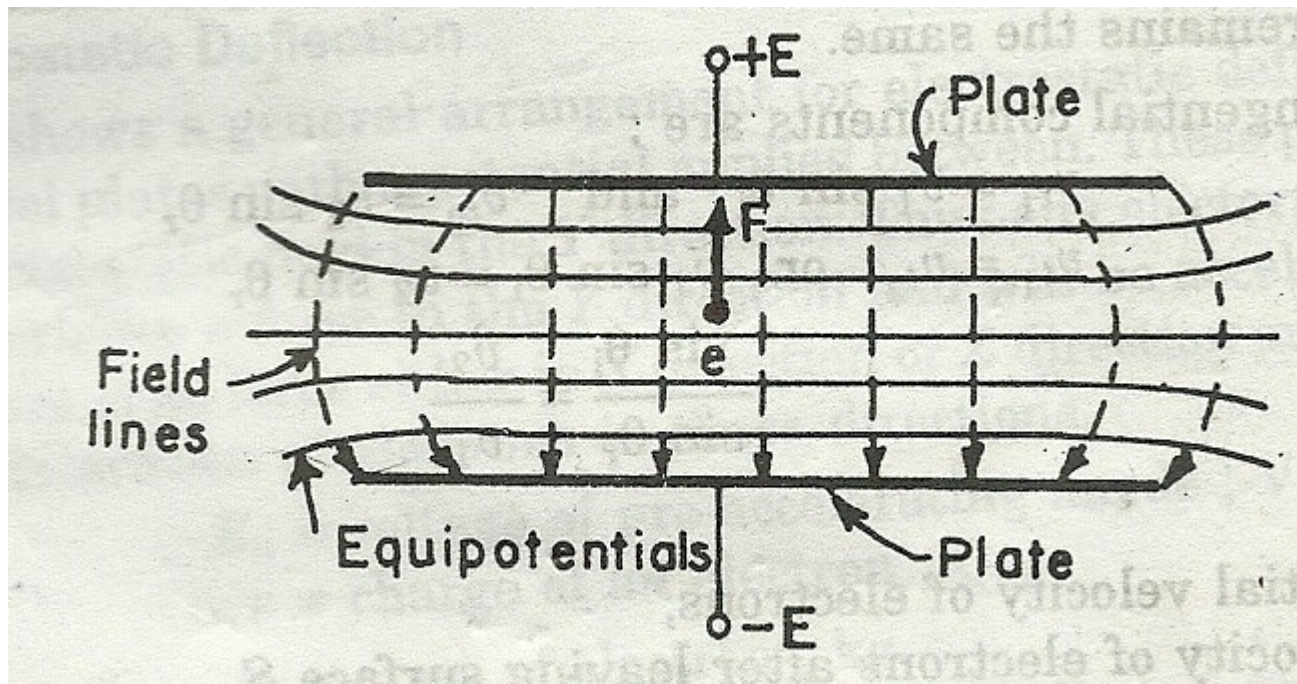
- ▶ THE WORKING PARTS ARE ENCLOSED IN AN GLASS ENVELOPE SO THAT THE EMITTED ELECTRONS ARE ABLE TO MOVE ABOUT FREELY FROM ONE END OF THE TUBE TO THE OTHER.
- ▶ BASE, THROUGH WHICH CONNECTIONS ARE MADE TO VARIOUS PARTS.

ASSIGNMENT

Q.DRAW BLOCK DIAGRAM OF CRT AND EXPLAIN IT IN BRIEF.



Electrostatic Focusing



Electrostatic Focusing

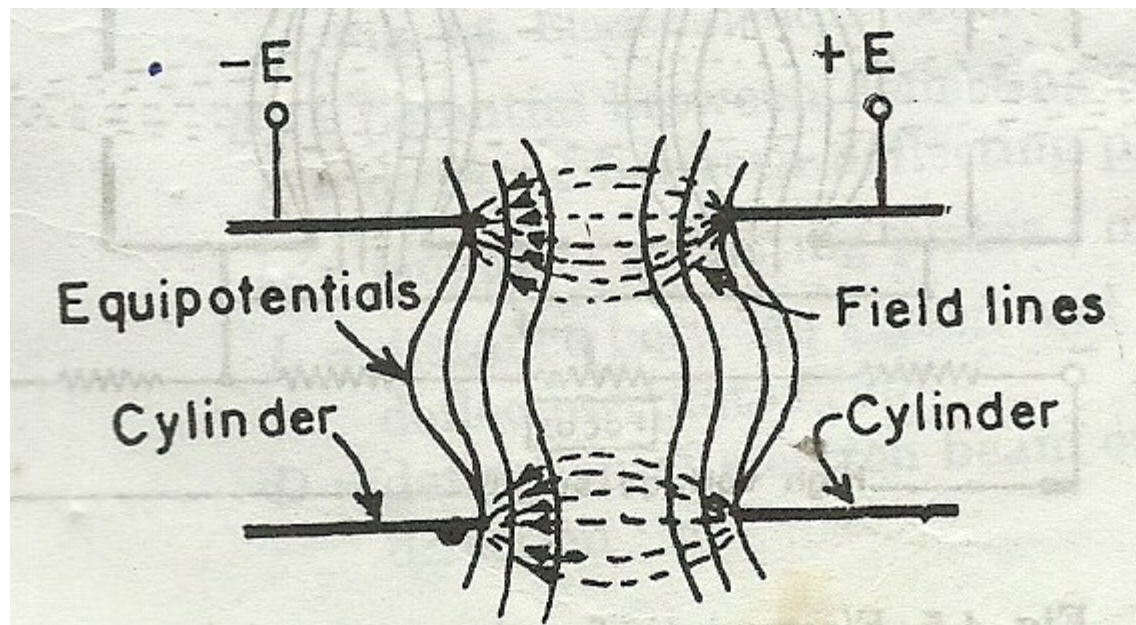
- ▶ $F = -eE$ newton

Where e = charge on electron

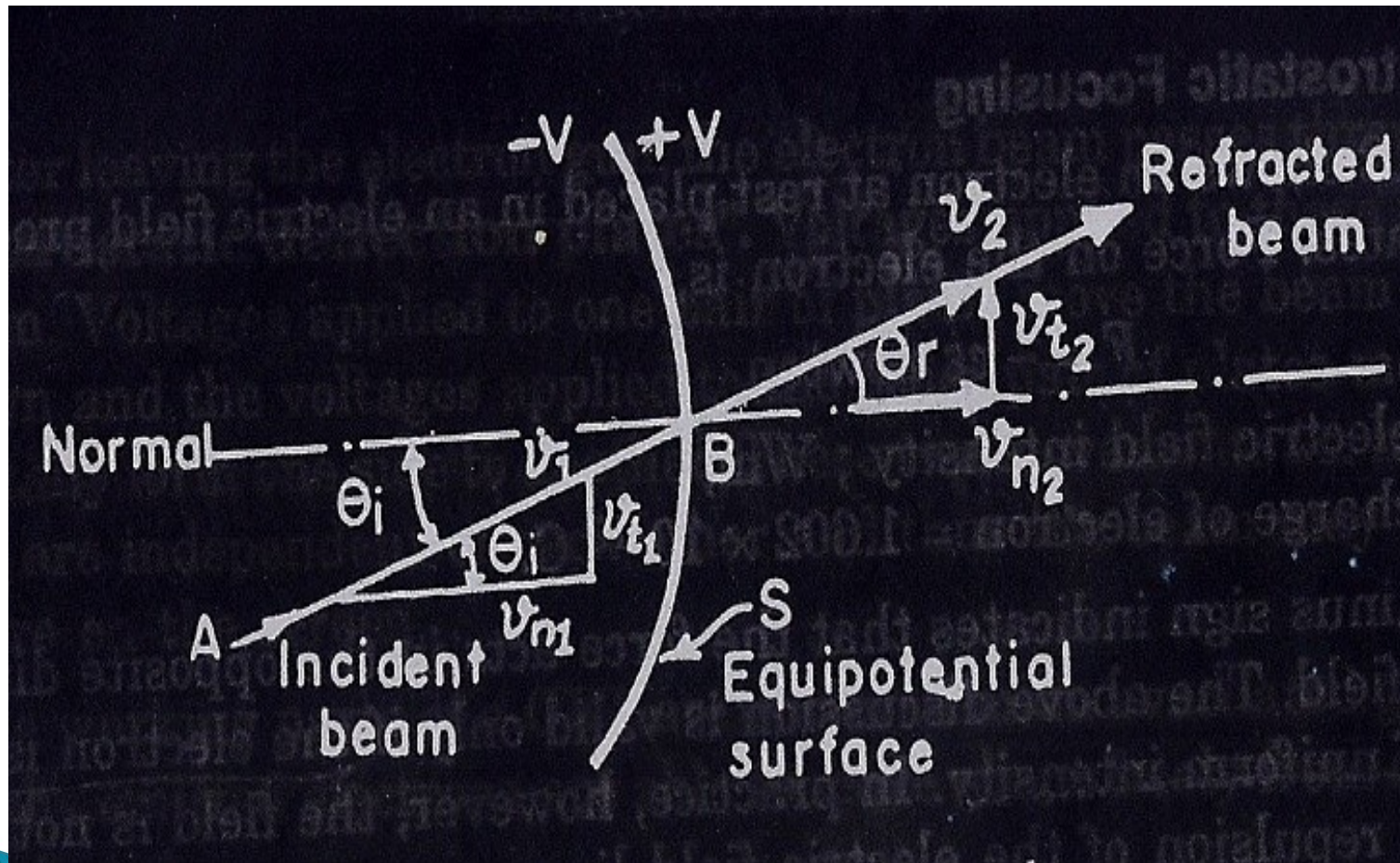
E = electric field intensity; V/m

– It is valid only if the electron is situated in a field of uniform intensity.

Electrostatic Focusing



Electrostatic Focusing



$$v_{t1} = v_1 \sin \theta_i \text{ and } v_{t2} = v_2 \sin \theta_r$$

$$v_{t1} = v_{t2} \text{ or } v_1 \sin \theta_i = v_2 \sin \theta_r$$

$$\sin \theta_i / \sin \theta_r = v_2 / v_1$$

v_1 = initial velocity of electrons,

v_2 = velocity of electrons after leaving surface S,

θ_i = angle of incidence,

θ_r = angle of refraction.

Electrostatic focusing arrangement

