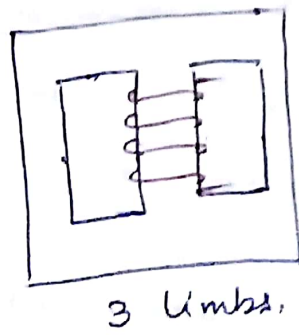
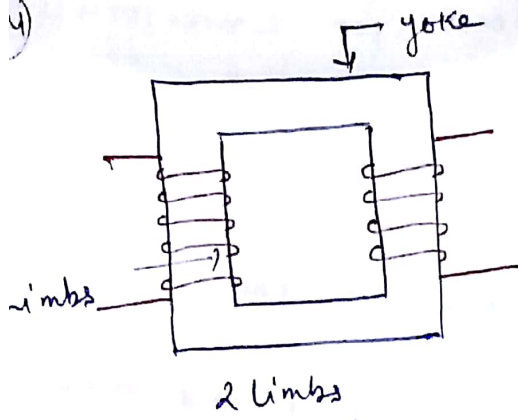


Q. 2.

TYPES OF MAGNETIC CRTs:

- i) Core type
- ii) Shell type



Shell type.

Core type

- 2 limbs
- Both limbs have windings.
- Windings are not well protected.

- 3 limbs
- Both H.V & L.V windings are placed on middle limb.
- Windings are well protected by outer limbs.

- Core surrounded by windings
- Leakage flux more
- Mechanical support: less

- Windings surrounded by core.
- Leakage flux less.
- Mechanical support: more

∴ leakage flux passes through outer limb and therefore can be tapped and again act as common flux not leakage flux. This facility absent in core type magnetic circuit. In core type leakage flux pass through air,

leakage flux less → More amt. of power is transferred from primary to secondary.

- Transfer less power
- Power transfer capability is more.

Flux path :

- Flux produced is passed throughout the core with out any division. Series magnetic ckt.

Flux produced opt for (25) - two paths along 2 outer limbs. i.e. flux division takes place. Parallel mag. circuit.

- Both limbs are of same X-sectional area. 3 limbs have diff. ϕ density. middle limb have flux ϕ outer limbs have $\phi/2$.

Therefore X-section of middle limb is double that of X-section of outer limbs.

- Amt. of copper req. is ~~less~~ more.
- Amt. of insulation is less.
- Amt. of copper req. is less.
- Amt. of insulation required is more.
- use for H.V. \therefore low insulation requirement.
- used L.V. \therefore insulation req. is more.

- I \uparrow a \uparrow Vol. of copper req. \uparrow
- used for low current rating.
- used for high current ratings.