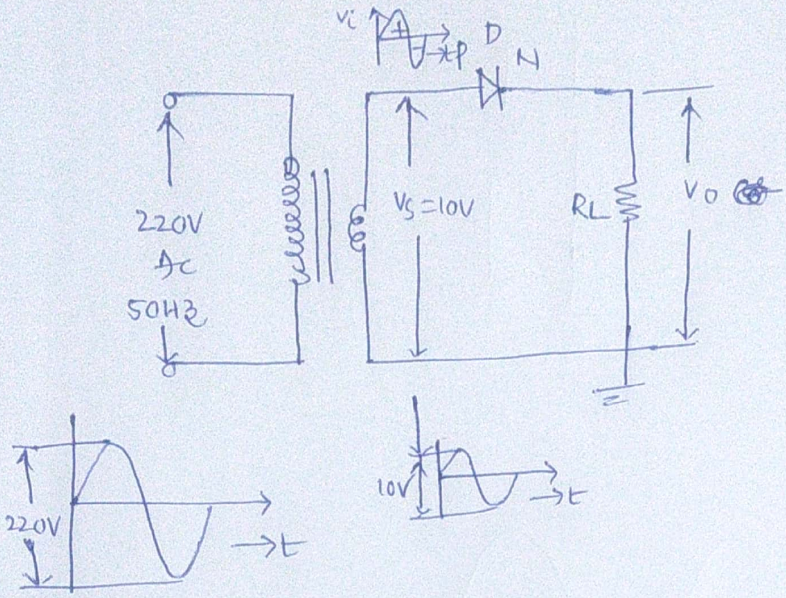
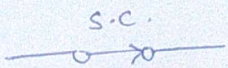
→ Half wave rectifier :

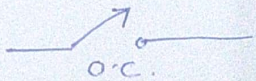


+ → P
− → N
F.B. → ON → S.C.



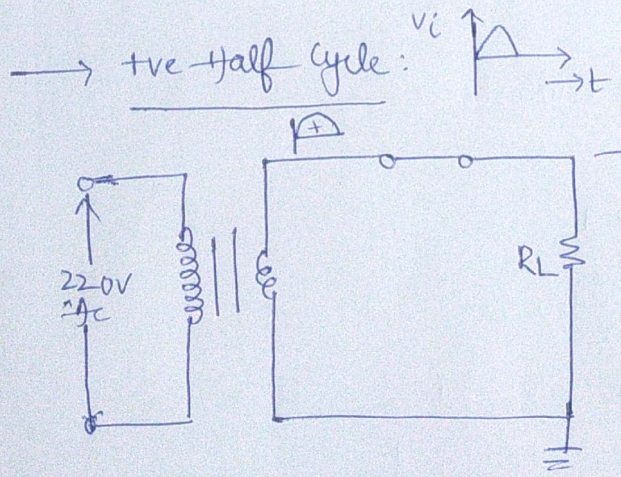
↳ means current flowing
(or) allowing.

− → P
+ → N
R.B. → OFF → O.C.

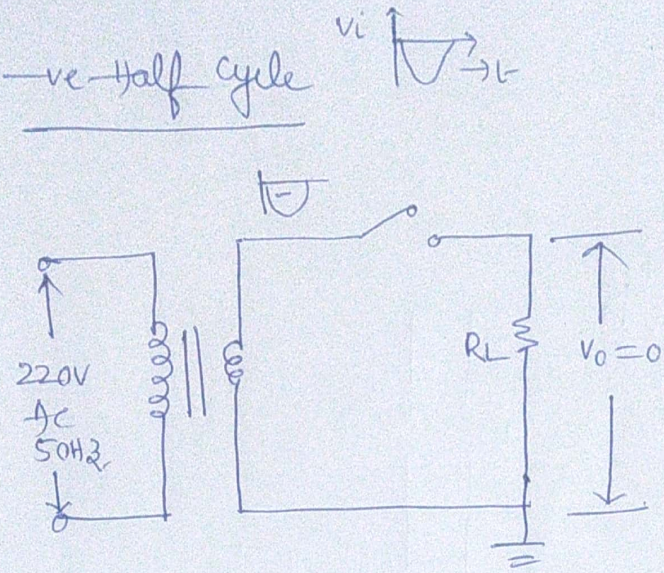


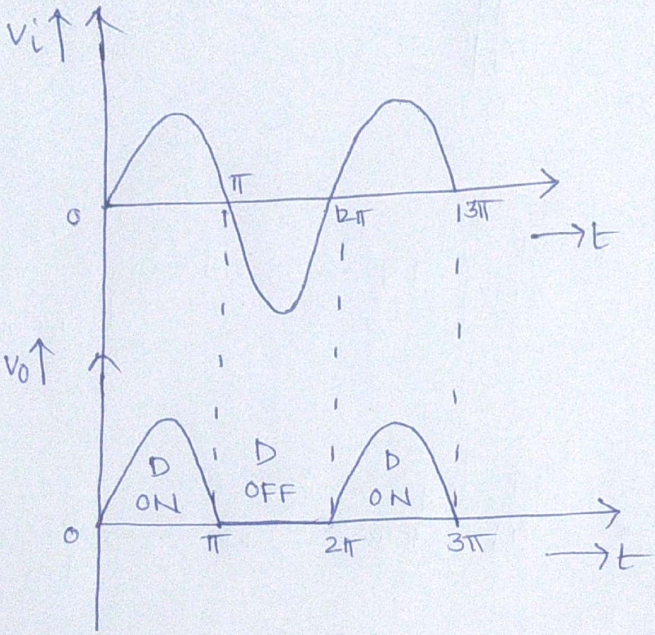
↳ is not allowing

→ +ve Half Cycle :



→ -ve Half cycle





→ Adv:

① Simple circuit & Low Cost.

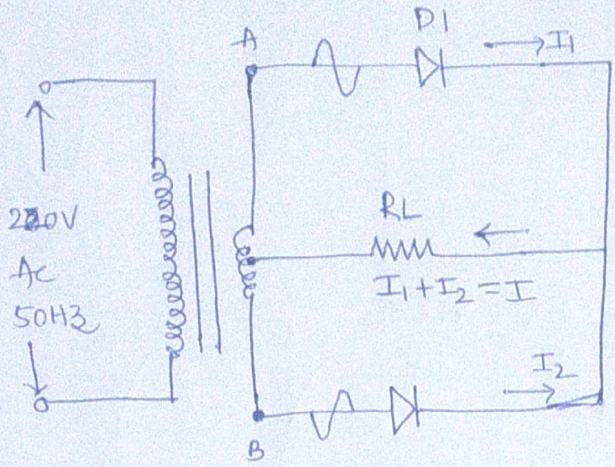
→ Disadv: ① $\gamma > 1$.

② $\eta = 40.6\%$

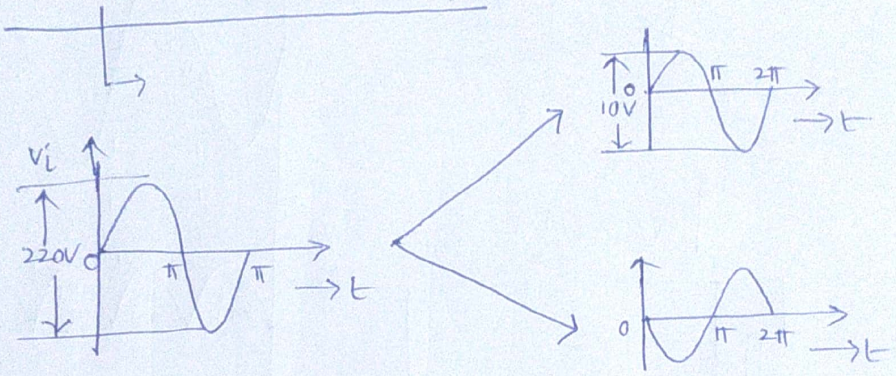
③ TUF = 0.287

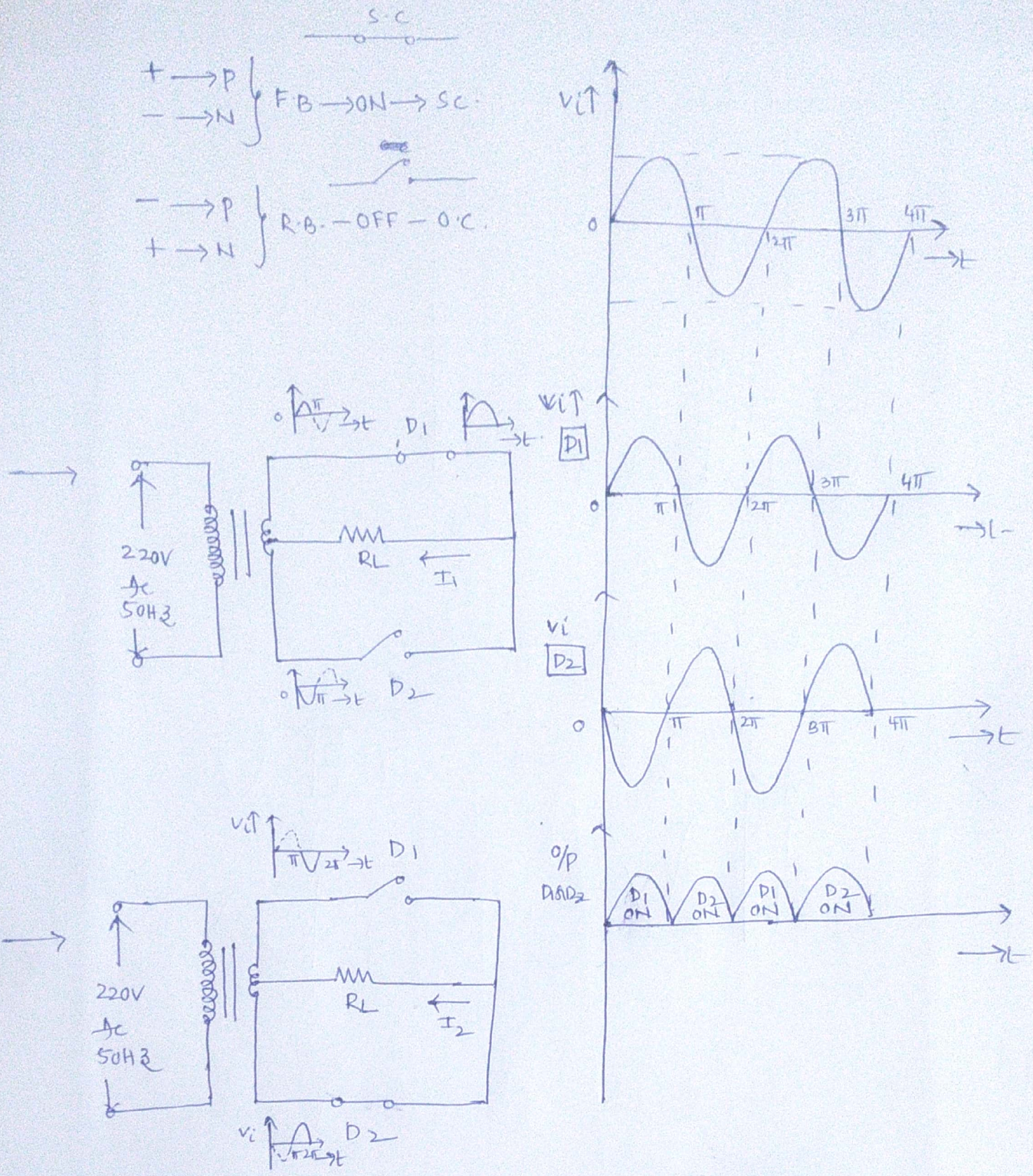
④ D.C. Component ↓

→ Center Tap full wave Rectifier:



Center tap step down Transformer:





→ Adv: ① only 2 diodes required

② efficiency is doubled compared to HWR

③ V ↓

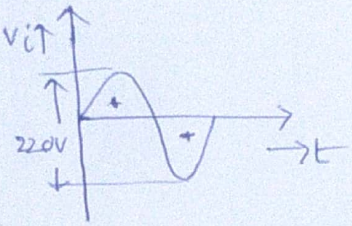
④ TUF ↑

⑤ D.C. Component ↑

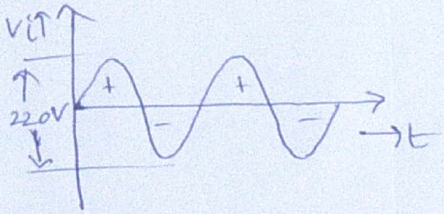
→ Disadv.:

- → Bulk & heavier & cost is more
- → If the center tap is loosen (or) broken then whole unit is Inoperative & unwanted Noise.

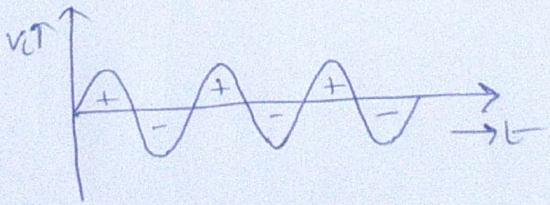
→ f = 1Hz



→ f = 2Hz



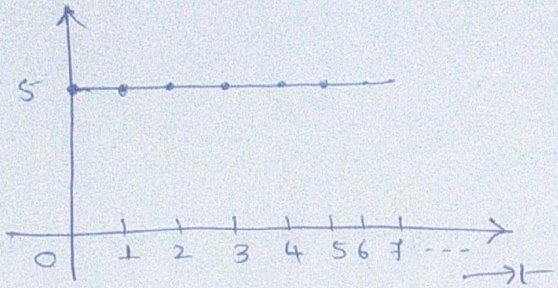
→ f = 3Hz



⋮

f = 50Hz

D.C



T, time, RL ⟶ o/p const.