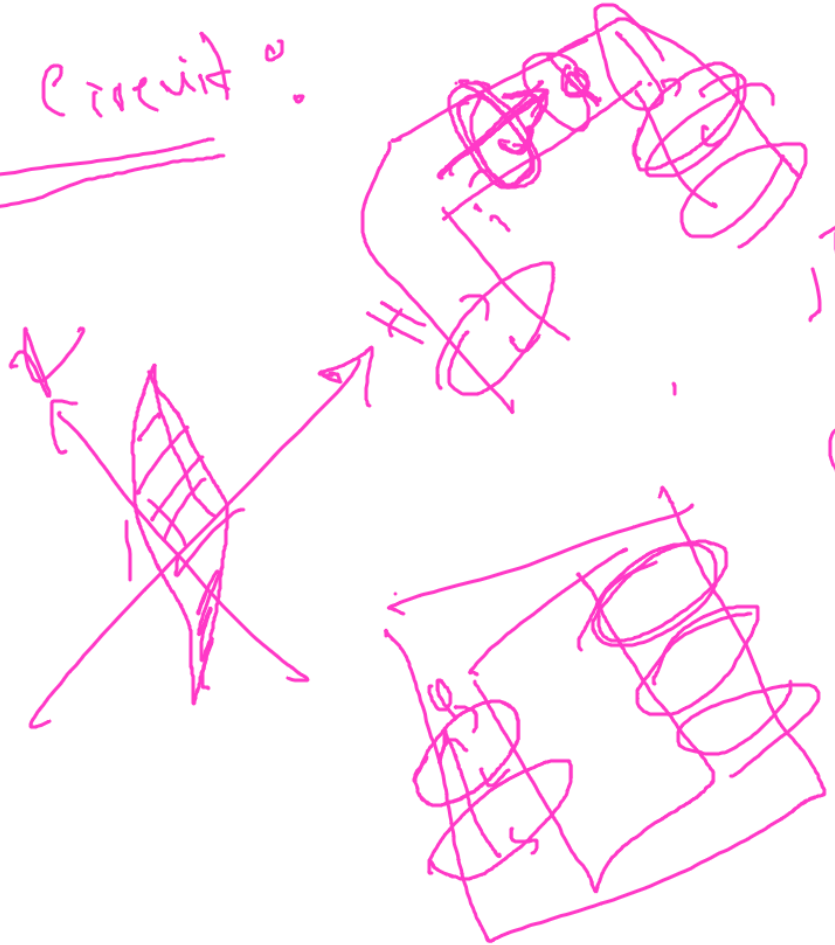
Equivalent Circuit :



Loss

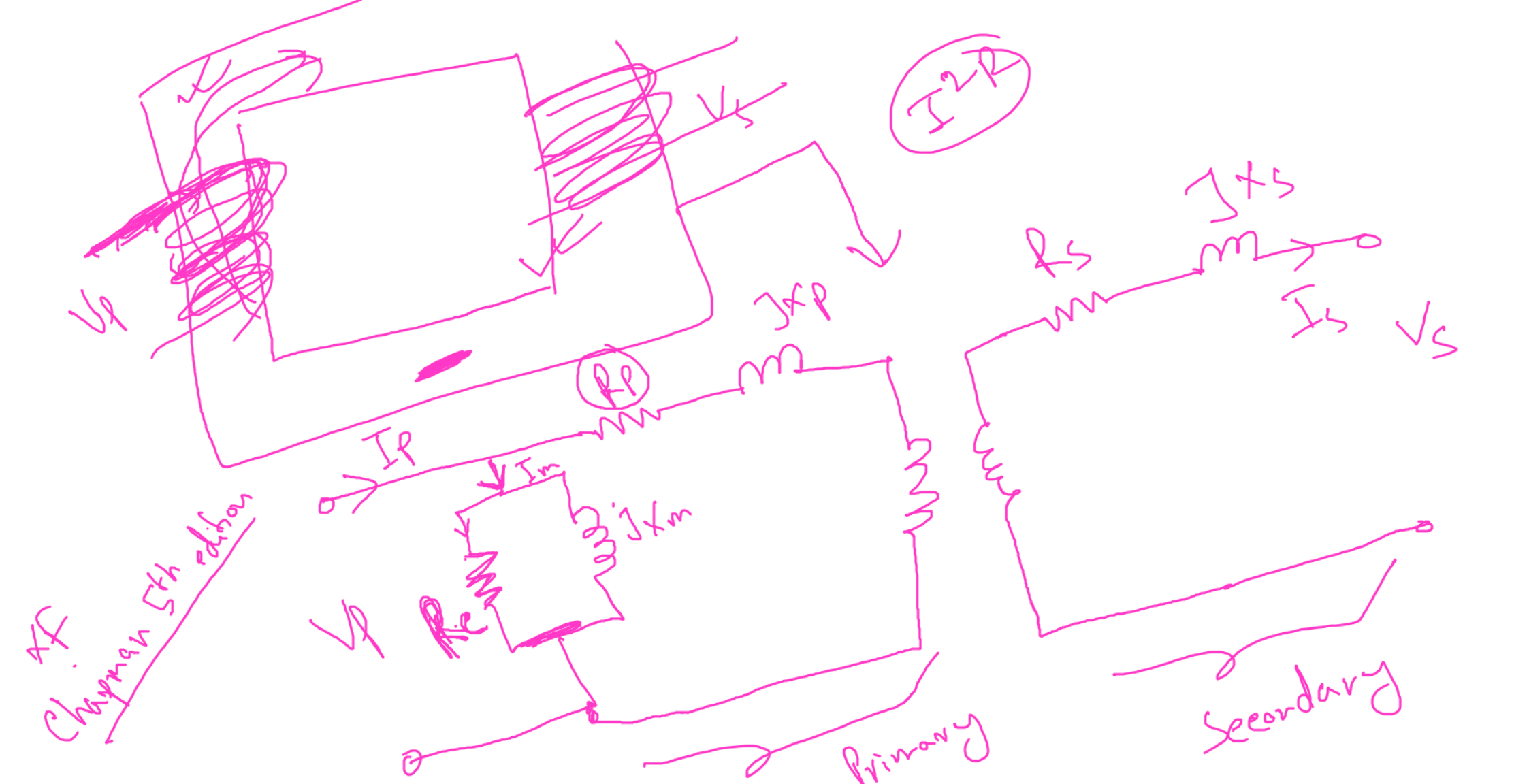
(i) Copper

(ii) Core loss

↓

(a) Hysteresis loss

(b) Eddy current loss


Vp
Vs
I²R
Rp
jXp
Ip
Im
jXm
Rc
Vp
Rs
jXs
Is
Vs
Primary
Seconday
Chapman 5th edition

Per unit Method

S_{base}, V_{base},

$S = VI^* = I^2 Z = \frac{V^2}{Z^*}$

$V = IR$

$S = 1000$ VA

$V = 1000$ V

Given

$S_{base} = 500$ VA

$V_{base} = 100$ V

Per unit:

$S_{pu} = \frac{1000}{500} = 2$

$V_{pu} = \frac{1000}{100} = 10$