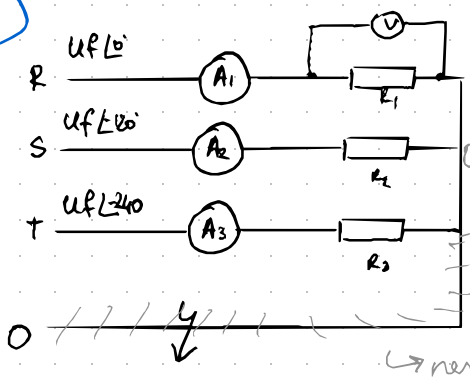
5.D7



$R_1 = 115\,\Omega$

$R_2 = 55\,\Omega$

$R_3 = 18\,\Omega$

$U_f = 215\,V$

$I_1 = ?\quad I_2 = ?\quad P_{uk} = ?$

↳ nema O vodiča pa je napon $U_{0'0}$

$$U_{0'0} = \frac{\frac{U_{fL0'}}{115} + \frac{U_{fL120°}}{55} + \frac{U_{fL-240}}{18}}{\frac{1}{115} + \frac{1}{55} + \frac{1}{18}} = 111,92\,V \angle 131,03°$$

$\rightarrow U_{R_1} = U_{fL0'} - U_{0'0} = 300,57 \angle -16,31° \rightarrow I_1 = \frac{U_{R1}}{R_1} = 2,61 \angle -16,31°$

$U_{R_2} = 272,76 \angle -97,16°$

$U_{R_3} = 107,31 \angle 108,49°$

$I_2 = 4,96 \angle -97,16°$

$I_3 = 5,96 \angle 108,49°$

kvrshi kut!

$$P_{uk} = P_1 + P_2 + P_3 = \frac{U_{R_1}^2}{R_1} + \frac{U_{R_2}^2}{R_2} + \frac{U_{R_3}^2}{R_3} = 1253,06 \angle -157,79°\ W$$

$I_1 = 2,61A$

$I_2 = 4,96A$

$P_{uk} = 1,253\,kW$

↳ PREDANO