ΕΝΔΕΙΚΤΙΚΕΣ ΑΠΑΝΤΗΣΕΙΣ

Θέμα 4ο

4.1 $P = U \cdot I \Rightarrow I = \frac{P}{U} \Rightarrow I = \frac{320W}{240V} \Rightarrow I = \frac{4}{3}A$

4.2 $R_{ολ} = \frac{U}{I} \Rightarrow R_{ολ} = \frac{240V}{\frac{4}{3}A} \Rightarrow R_{ολ} = \frac{3 \cdot 240}{4}\Omega \Rightarrow R_{ολ} = 180\Omega$

$R_{ολ} = R + R + R \Rightarrow R_{ολ} = 3R \Rightarrow R = \frac{R_{ολ}}{3} \Rightarrow R = \frac{180\Omega}{3} \Rightarrow R = 60\Omega$

4.3 $R_{ολ}' = \frac{R}{3} \Rightarrow R_{ολ}' = \frac{60\Omega}{3} \Rightarrow R_{ολ}' = 20\Omega$

4.4 $I' = \frac{U}{R'_{ολ}} \Rightarrow I' = \frac{240V}{20\Omega} \Rightarrow I' = 12A$

4.5 $P' = U \cdot I' \Rightarrow P' = 240V \cdot 12A \Rightarrow P' = 2880W$