

ΕΝΔΕΙΚΤΙΚΕΣ ΑΠΑΝΤΗΣΕΙΣ

Θέμα 4^ο

4.1

$$\eta = \frac{P_{\varepsilon \xi}}{P_{\varepsilon \iota \sigma}} \Rightarrow 0,8 = \frac{40000}{P_{\varepsilon \iota \sigma}} \Rightarrow P_{\varepsilon \iota \sigma} = \frac{40000}{0,8} = 50000W = 50KW$$

$$P_{\varepsilon \iota \sigma} = U \cdot I_{ov} \Rightarrow I_{ov} = \frac{P_{\varepsilon \iota \sigma}}{U} = \frac{50000}{500} = 100A$$

$$I_{ov} = I_T$$

$$U = E_a + I_T \cdot R_T \Rightarrow E_a = U - I_T \cdot R_T \Rightarrow E_a = 500 - 100 \cdot 1 = 400V$$

4.2

$$P = \frac{T_\alpha \cdot n}{9,55} \Rightarrow T_\alpha \cdot n = 9,55 \cdot P \Rightarrow T_\alpha = \frac{9,55 \cdot P}{n} \Rightarrow T_\alpha = \frac{9,55 \cdot 40000}{1000} = 382Nm$$