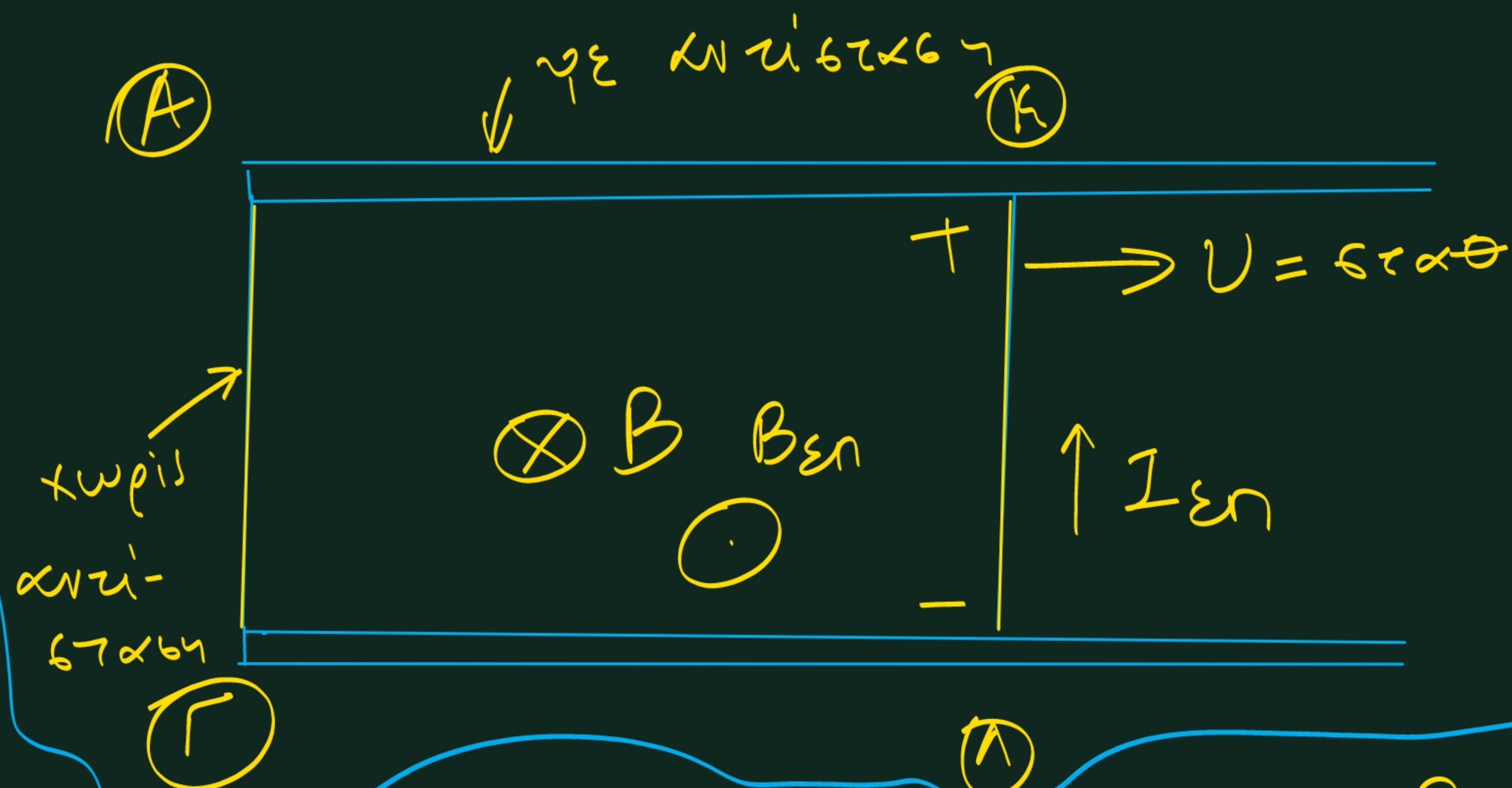


Αδ. 5.59.

$$l = 10 \text{ cm} = 0.1 \text{ m}$$

$$R^* = 0.01 \Omega / \text{cm} = \frac{0.01 \Omega}{0.01 \text{ m}} = 1 \Omega / \text{m}$$

$$B = 5 \cdot 10^{-2} \text{ T}$$



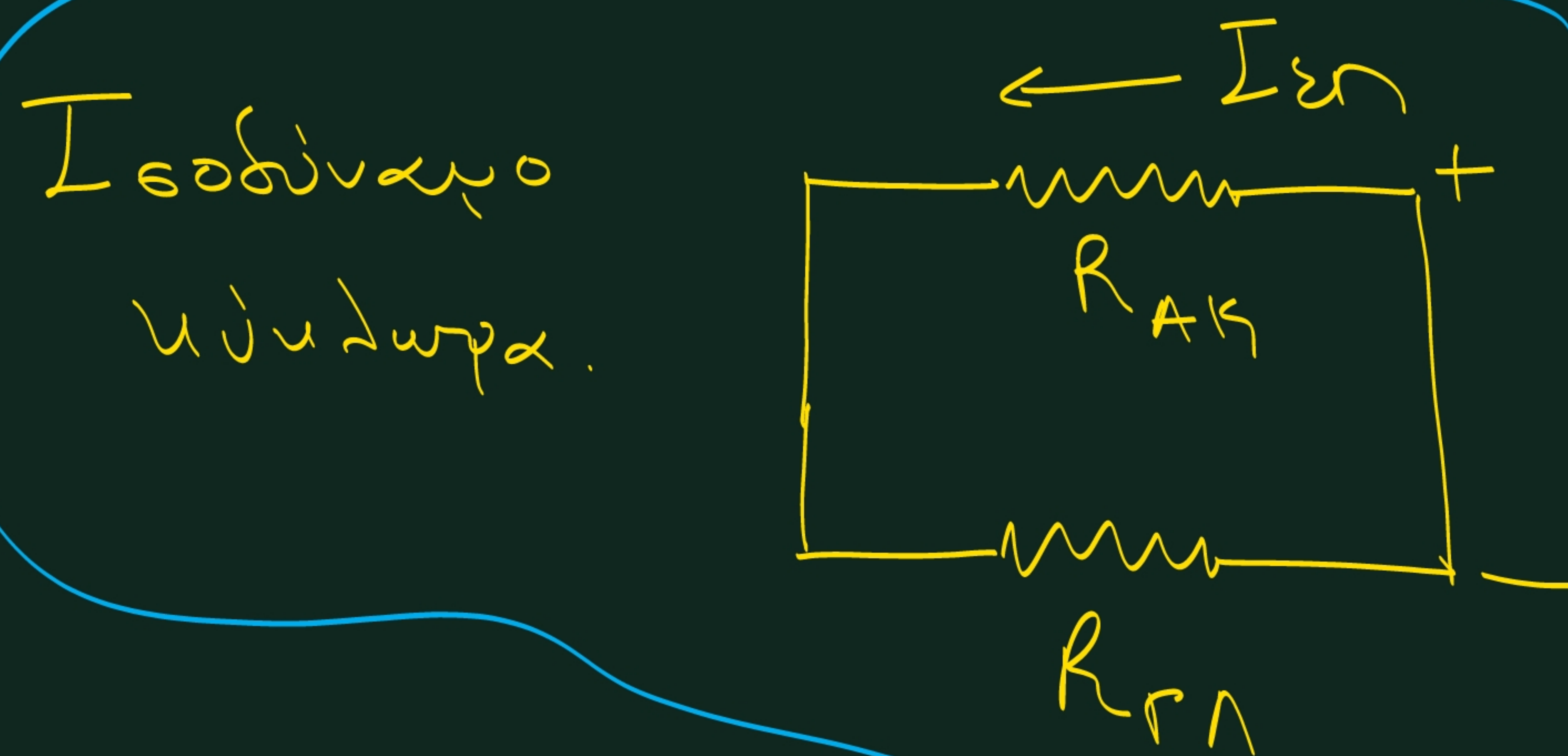
Ο αγωγός ΚΛ
τη στιγμή $t=0$
βρίσκεται στη θέση
ΑΓ.

$$E_{\epsilon\nu} = \frac{\Delta\Phi}{\Delta t} = \frac{B \cdot \Delta A}{\Delta t} = \frac{B l \cdot v \cdot \Delta t}{\Delta t} = B l v$$

$$R_{\kappa} = R^* \cdot A_{\kappa} = R^* \cdot v \cdot t = R_{\Gamma\Lambda}$$

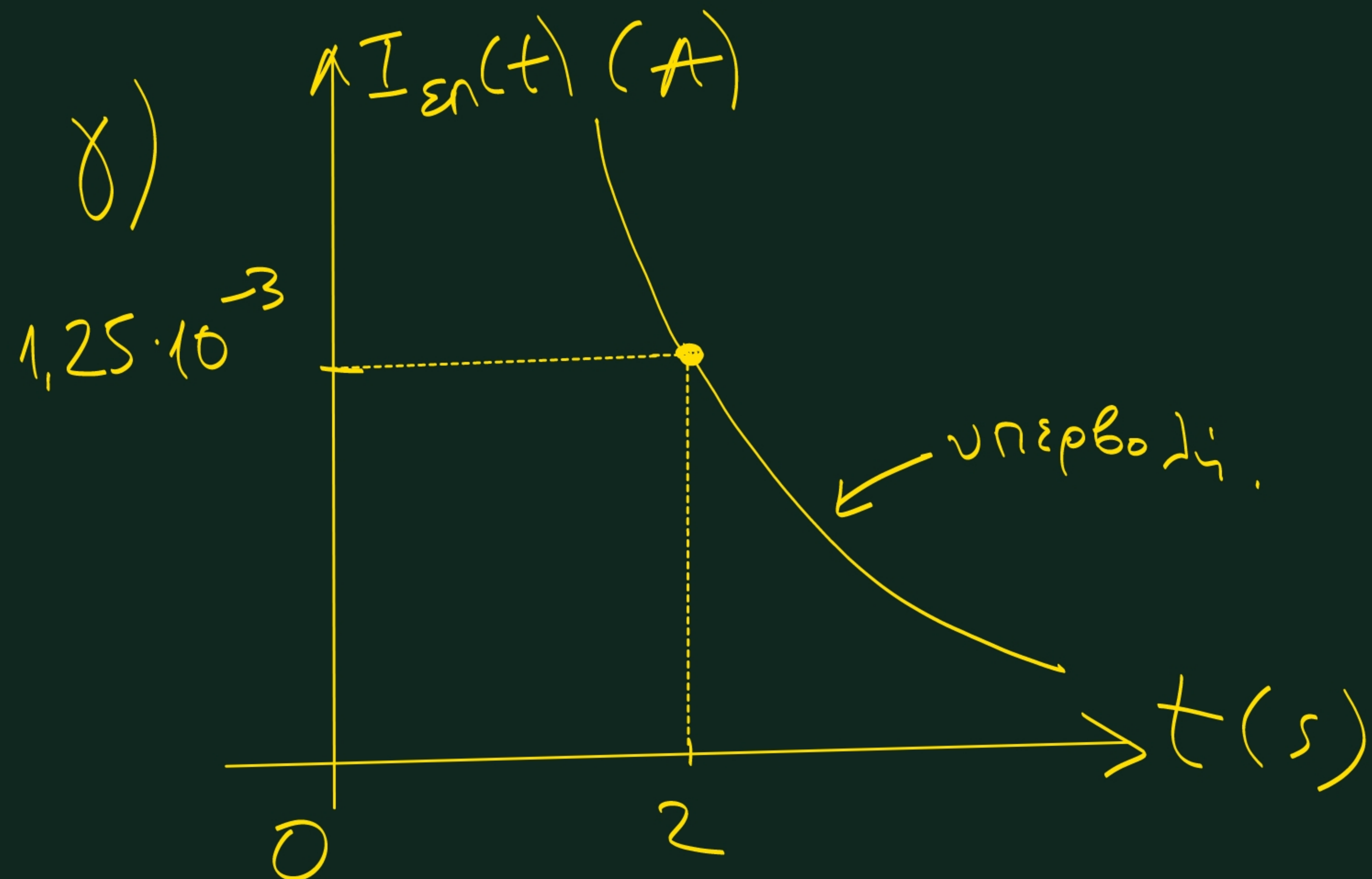
$$\text{Άρα: } I_{\epsilon\nu} = \frac{E_{\epsilon\nu}}{R_{\text{ολ}}} = \frac{B l \cdot v}{R_{\kappa} + R_{\Gamma\Lambda}} = \frac{B l v}{2 R^* v t} \Rightarrow$$

$$I_{\epsilon\nu} = \frac{B l}{2 R^* t} \Rightarrow I_{\epsilon\nu}(t) = \frac{5 \cdot 10^{-3}}{2 \cdot 1 \cdot t} \Rightarrow I_{\epsilon\nu}(t) = \frac{2.5 \cdot 10^{-3}}{t} \text{ (SI)}$$

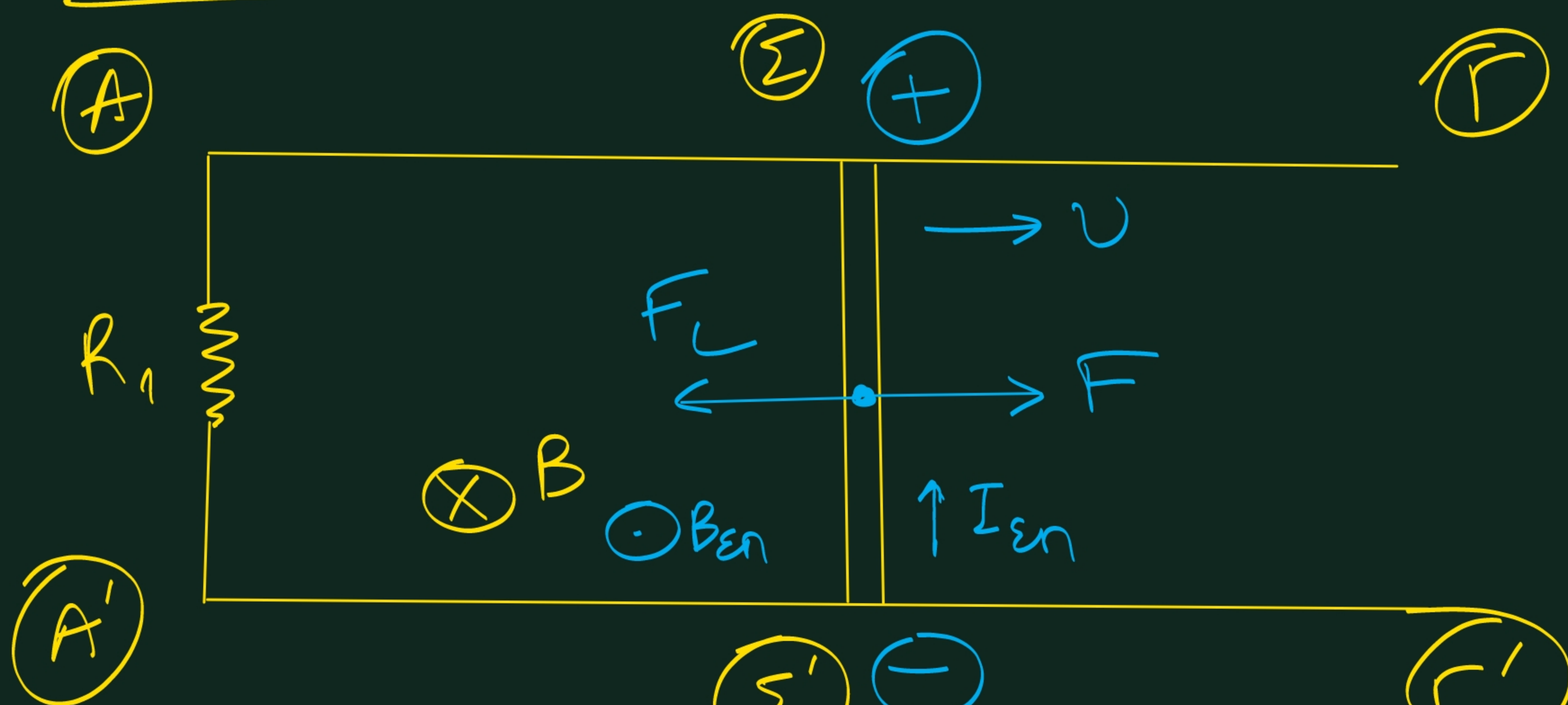


6) Το σημείο $t_1 = 2 \text{ sec}$ έχουμε:

$$I_{\text{en}}(2) = \frac{2,5 \cdot 10^{-3}}{2} = 1,25 \cdot 10^{-3} \text{ A}$$

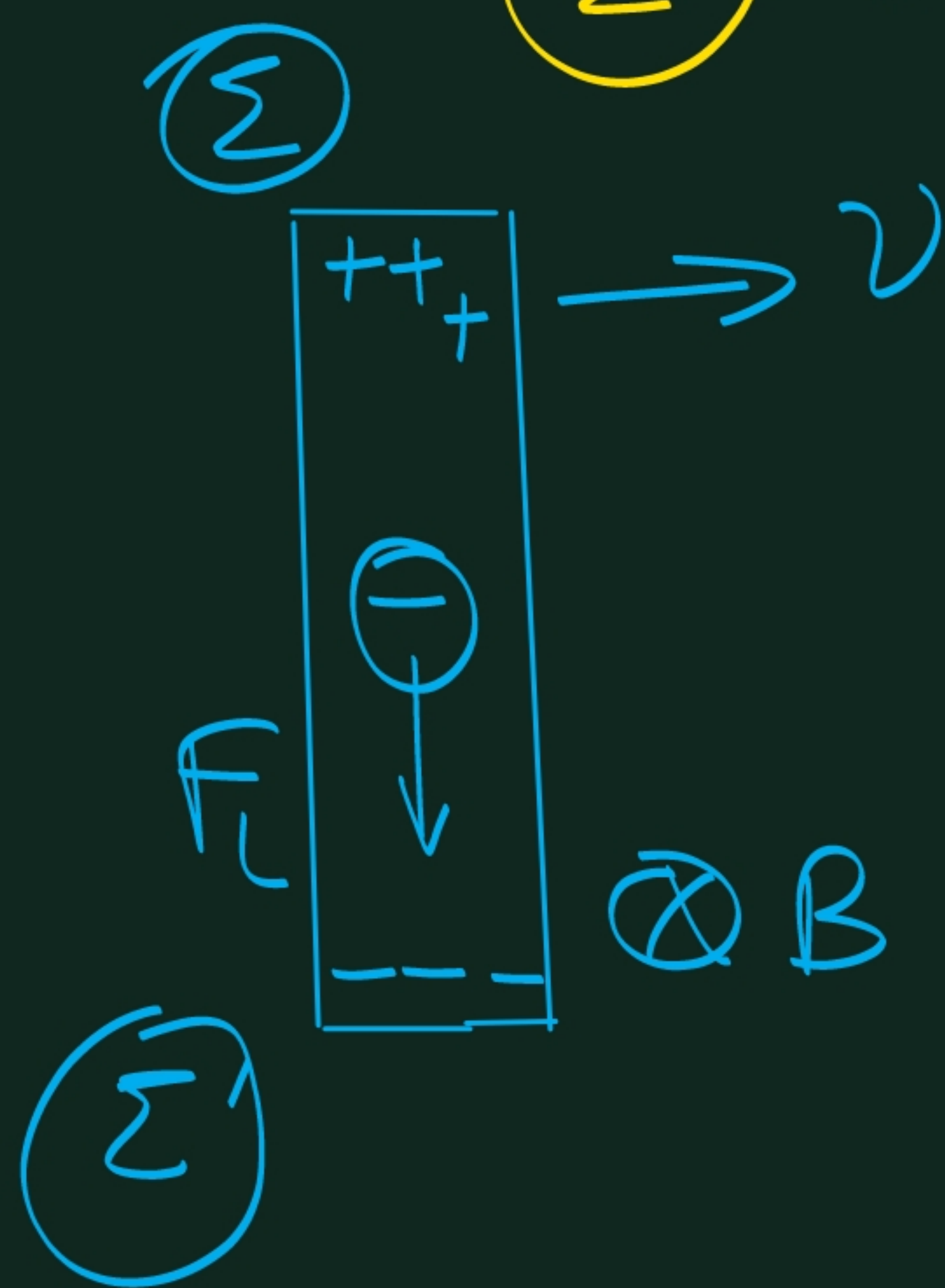


Ασκ. 5.60.

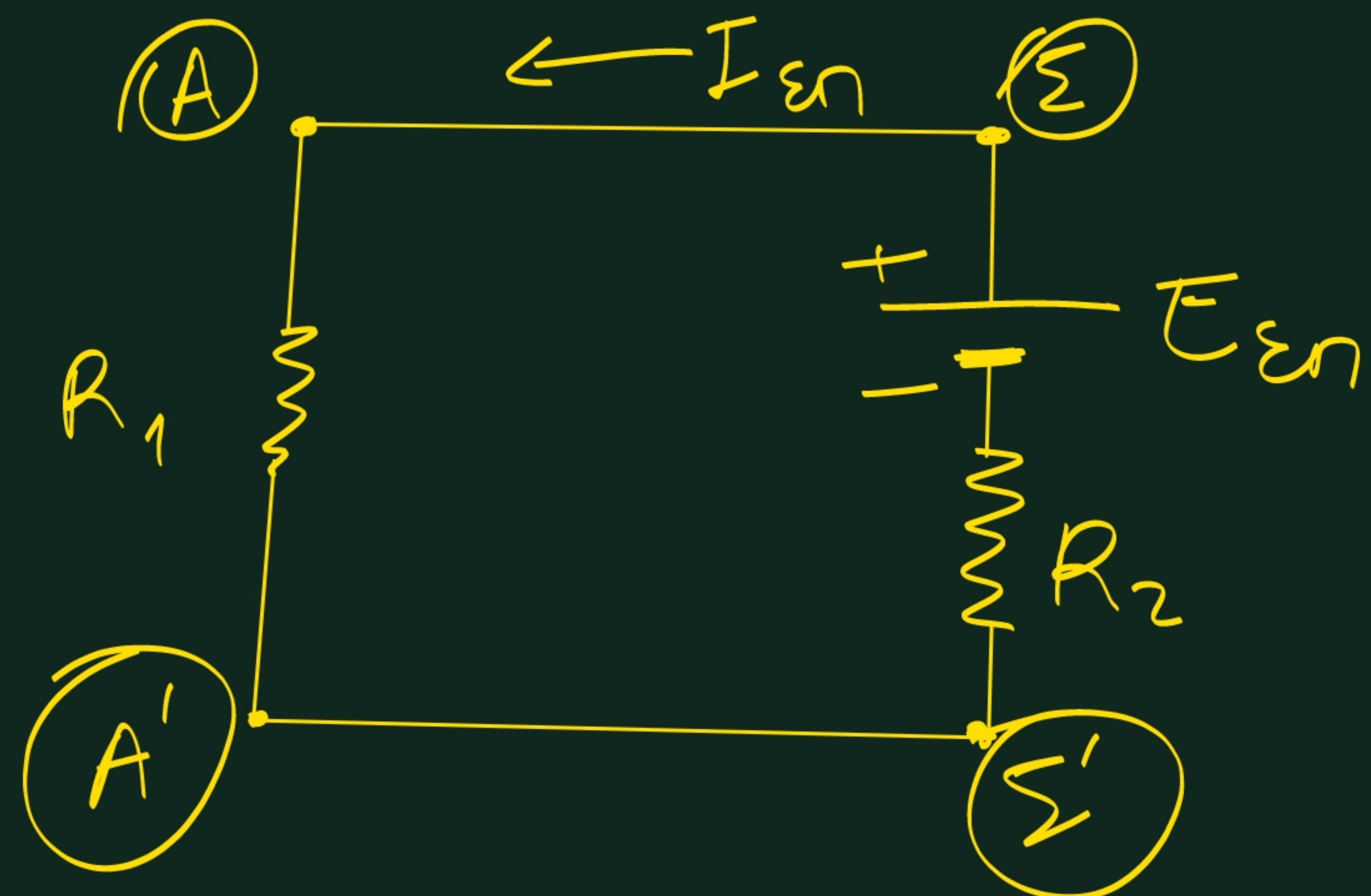


$$R_1 = 0,1 \Omega$$

$$R_2 = 0,5 \Omega$$



Ισοδύναμο κύκλωμα.



α) Όταν σταθεροποιείται η ταχύτητα
γίνεται: $F = F_L \Rightarrow F = B I_{en} l \Rightarrow$

$$F = B \cdot \frac{B v_{op} l}{R_1 + R_2} l \Rightarrow v_{op} = \frac{F(R_1 + R_2)}{B^2 l^2} \Rightarrow$$

$$v_{op} = \frac{1 \cdot 0,6}{0,04 \cdot 1} = \frac{60}{4} = 15 \text{ m/s.}$$

