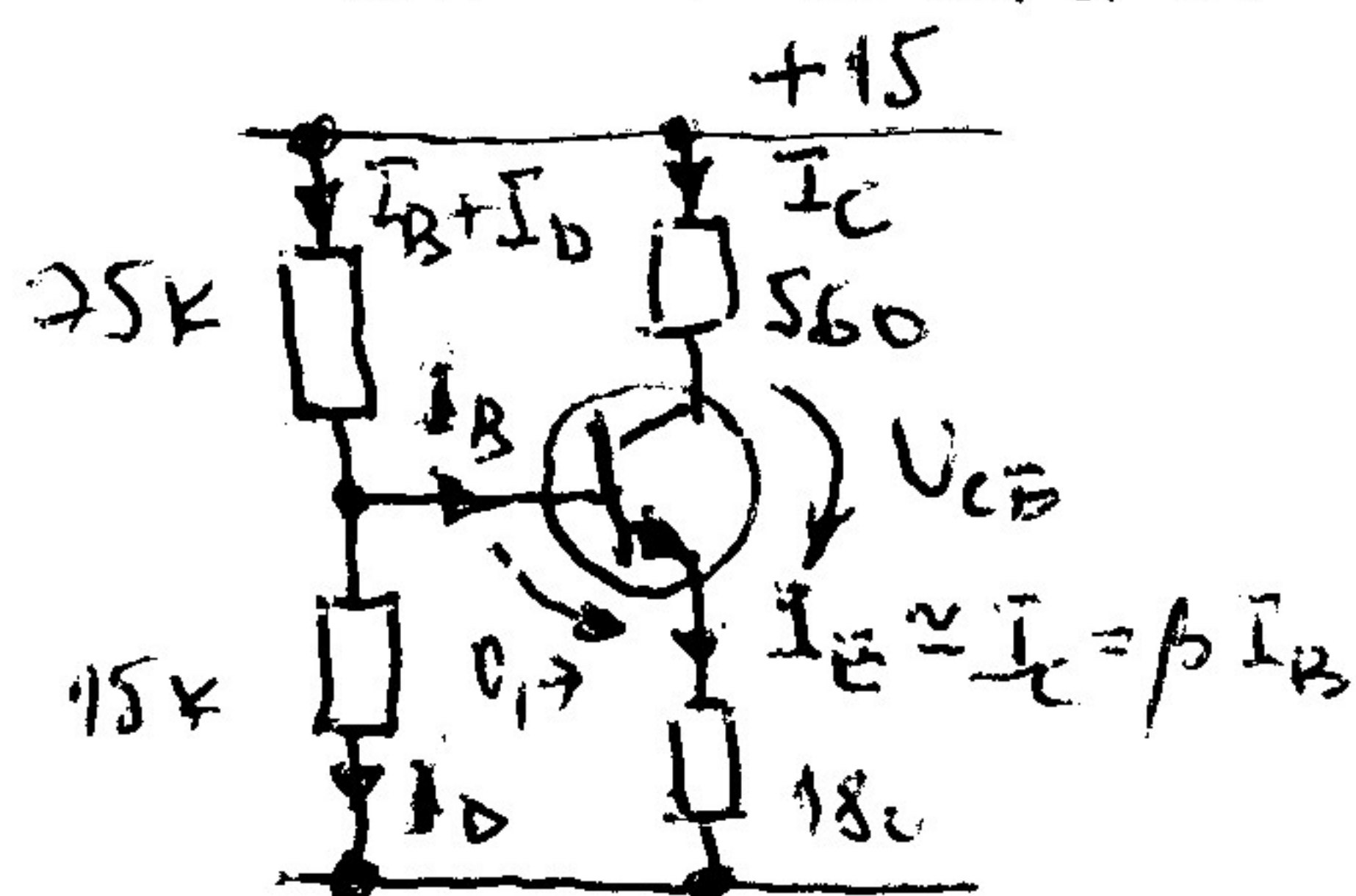


Schema echivalent de c.c.



$$\frac{10,8 \cdot 183}{915} = 0,058$$

$$\frac{740 \cdot 5,8}{3700} = 1,16$$

$$\frac{5920}{4292,0} \approx 1,38$$

$$\beta = 100$$

$$I_C, U_{CE} = ?$$

$$U_A = ?$$

Ecuații de calcul:

$$15 = 75 \cdot 10^3 (I_B + I_D) + 15 \cdot 10^3 I_D$$

$$15 \cdot 10^3 I_D = 0,7 + 180 \cdot 10^3 I_B$$

$$15 = 560 \cdot I_C + U_{CE} + 180 \cdot 100 \cdot I_B$$

Se primește două:

$$15 = 75 \cdot 10^3 I_B + 90 \cdot 10^3 \cdot \frac{0,7 + 18 \cdot 10^3 I_B}{15 \cdot 10^3}$$

$$15 = 75 \cdot 10^3 I_B + 6 (0,7 + 18 \cdot 10^3 I_B)$$

$$I_B = \frac{15 - 4,2}{75 \cdot 10^3 + 108 \cdot 10^3} = \frac{10,8}{183} \cdot 10^{-3}$$

$$= 0,058 \mu A$$

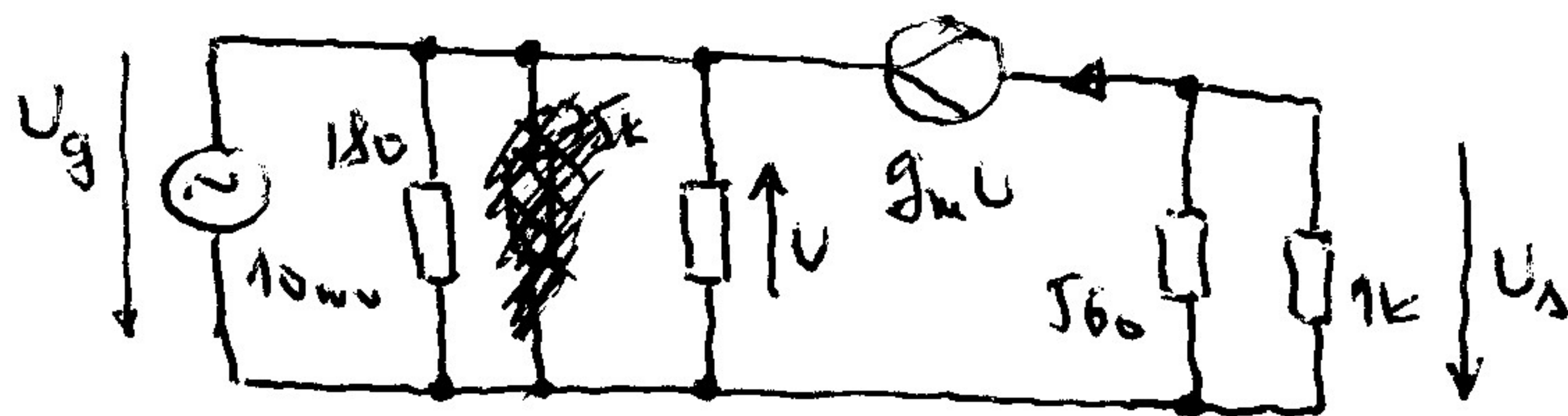
$$I_C = 100 \cdot 0,058 \mu A$$

$$I_C = 5,8 \mu A$$

$$\text{Se obține: } U_{CE} = 15 - (560 + 180) \cdot 5,8 \cdot 10^{-3}$$

$$U_{CE} = 15 - 4,2 = 10,8 V$$

Schema echivalent de c.a.



$$\frac{560 \cdot 1000}{1560} = 360$$

$$\frac{560 \cdot 11560}{4680} = 0,36$$

$$\frac{232 \cdot 36}{1392} = 6,96$$

$$8352 \approx 8,4 \cdot 10^3$$

$$U_A = -g_m U \cdot 560 \parallel 1k \quad U = -U_g$$

$$g_m = 40 I_C = 40 \cdot 5,8 \cdot 10^{-3} \frac{1}{\Omega}$$

$$U_A = g_m U_g \cdot 360 =$$

$$= 232 \cdot 10^{-3} \cdot 10 \cdot 10^{-3} \cdot 360 =$$

$$= 232 \cdot 36 \cdot 10^{-6} = 8,4 \cdot 10^3 \cdot 10^{-2}$$

$$U_A = 0,84 V$$