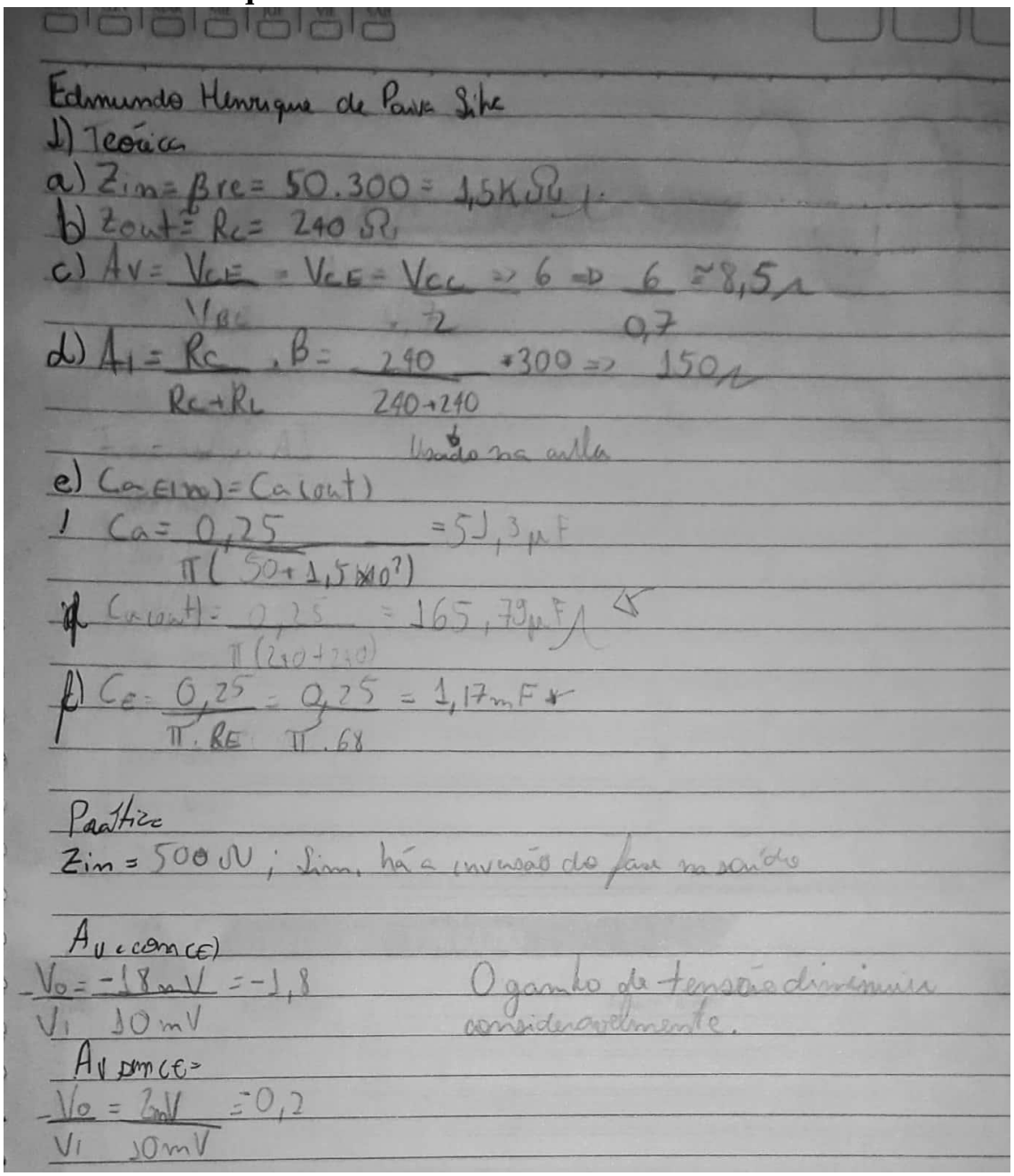


Edmundo Henrique de Paiva Silva

1) Teórica

a) $Z_{in} = \beta r_e = 50.300 = 1,5 K\Omega$

b) $Z_{out} = R_C = 240\ \Omega$

c) $A_V = \frac{V_{CE}}{V_{BE}} = \frac{V_{CE}}{\frac{V_{CC}}{2}} \Rightarrow \frac{6}{0,7} \Rightarrow 8,5$

d) $A_I = \frac{R_C}{R_C + R_L} \cdot \beta = \frac{240}{240+240} \cdot 300 \Rightarrow 150$

Usado na aula

e) $C_{a(Emiss.)} = C_{a(out)}$

$C_a = \frac{0,25}{\pi(50 + 1,5 \times 10^3)} = 51,3\ \mu F$

$C_{a(out)} = \frac{0,25}{\pi(240+240)} = 165,79\ \mu F$

f) $C_E = \frac{0,25}{\pi \cdot R_E} = \frac{0,25}{\pi \cdot 68} = 1,17\ mF$

Prática

$Z_{in} = 500\ \Omega$; Sim, há a inversão do sinal na saída

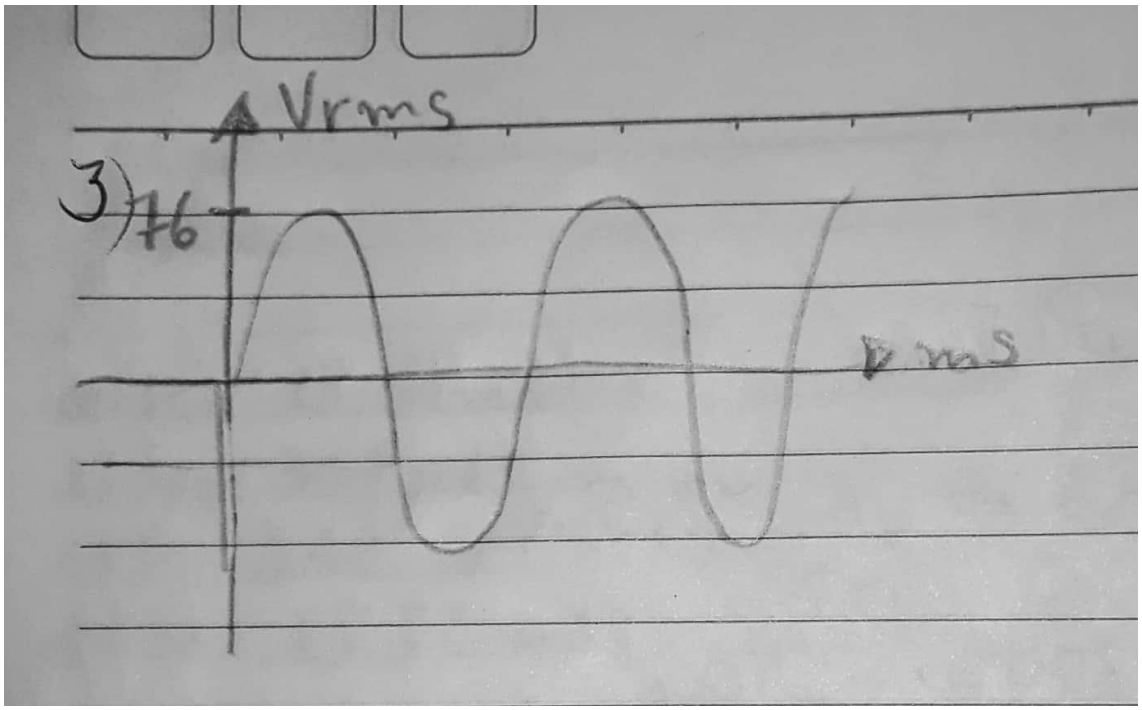
$A_{V\ (com\ C_E)}$

$\frac{V_o}{V_i} = \frac{-18\ mV}{10\ mV} = -1,8$

O ganho de tensão diminuiu consideravelmente.

$A_{V\ (sem\ C_E)}$

$\frac{V_o}{V_i} = \frac{2\ V}{10\ mV} = 0,2$



Link da Simulação:
https://www.multisim.com/content/wf36m8DMzFqyvwZLydTpNX/relatorio-7-e205-l7/open/