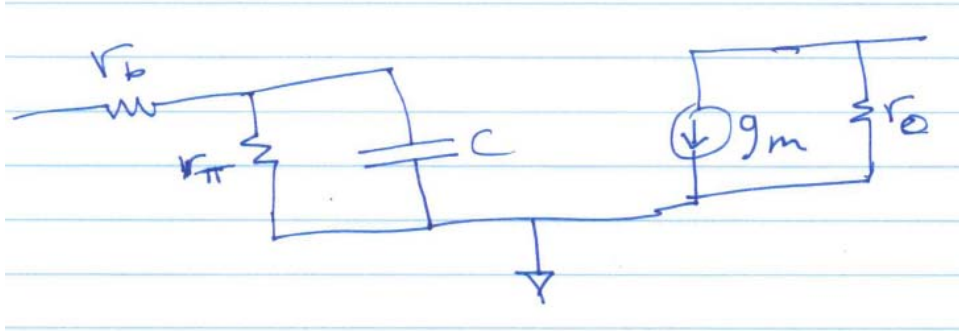


HW3 EECS 277B Win 2010

- 1) For the circuit below, find the y-matrix. Next, find  $h_{21}$  completely. Now find  $h_{21}$  when  $r_b \rightarrow 0$ . Now find  $h_{21}$  when  $f \rightarrow \infty$ . Calculate  $f_T$  in this case. Find Mason's gain  $U$  in terms of the circuit elements.



- 2) For the hypothetical density of electrons in the p region of an npn transistor biased in active mode, find the value of  $\beta$ .

