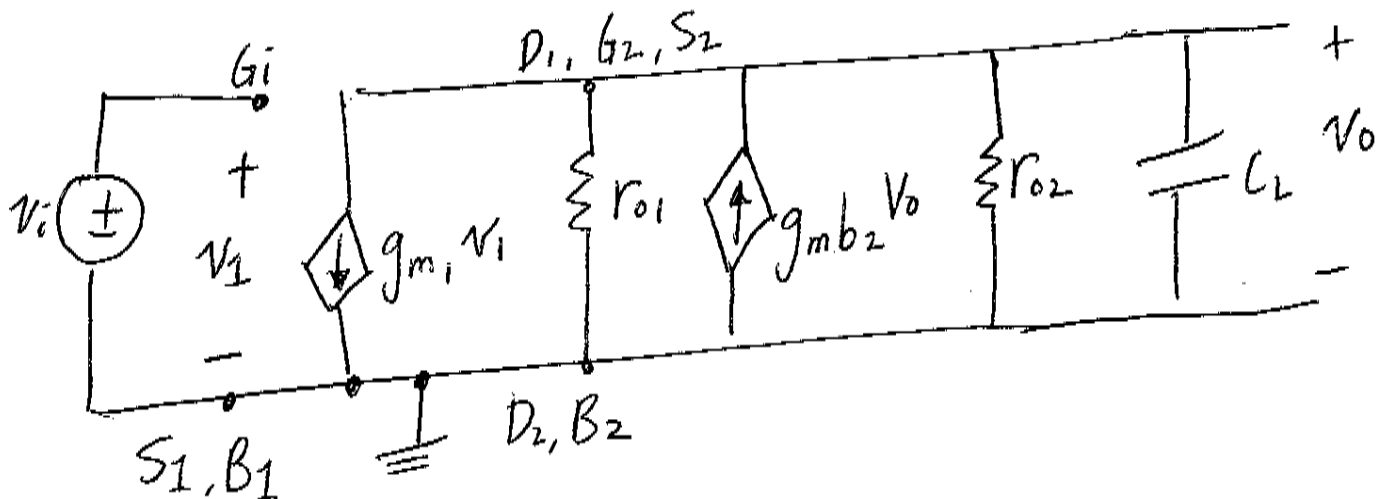
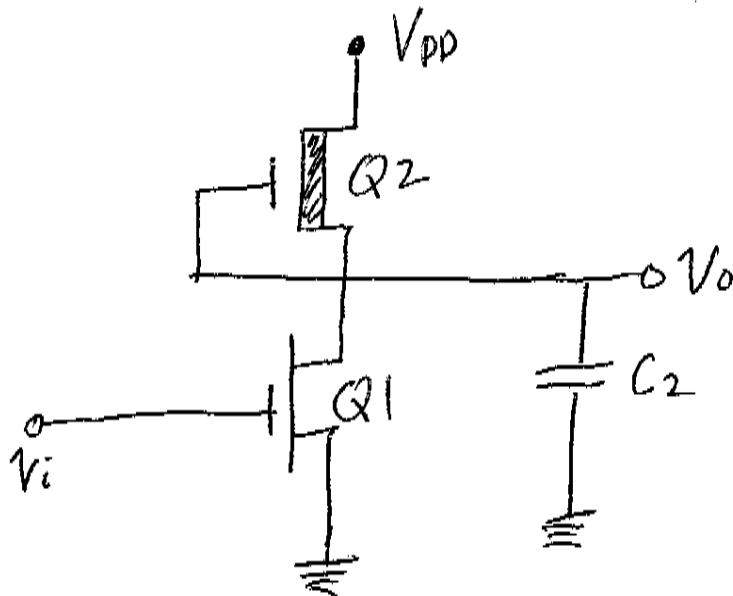


- (16) A depletion-load NMOS amplifier and its small-signal equivalent circuit are shown in the figures. For the small signal parameters $g_{m1} = 0.2 \text{ mA/V}$, $g_{m2} = 0.04 \text{ mA/V}$, $r_{o1} = r_{o2} = 50 \text{ k}\Omega$ and $C_L = 20 \text{ pF}$, calculate the mid-band voltage gain V_o/v_i .



- a) $v_o/v_i = -2.5 \text{ V/V}$
 b) $v_o/v_i = -1.5 \text{ V/V}$
 c) $v_o/v_i = -2.0 \text{ V/V}$
 d) $v_o/v_i = -1.0 \text{ V/V}$