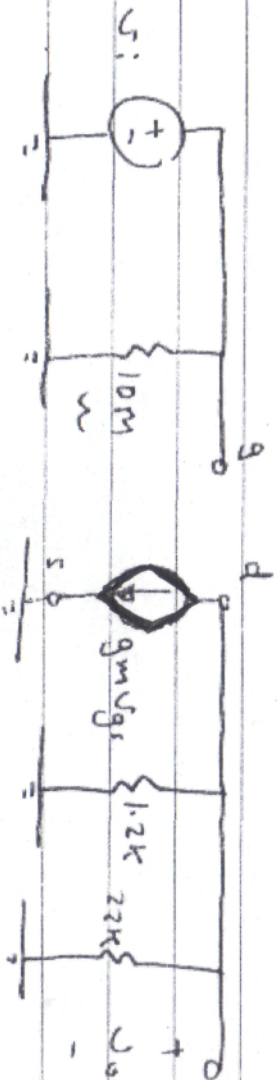


Homework Solutions
FET AC Analysis - Floyd

8.13

a) small signal equivalent ckt

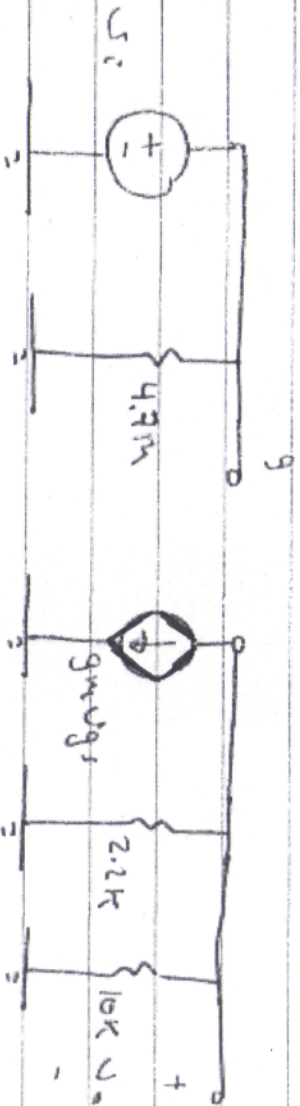


$$V_{G0} = -g_m V_{GS} (1.2K \parallel 2.2K) \quad ; \quad g_m = 2.5 \text{ mS}$$

$$V_{GS} = V_i$$

$$\therefore A_v = \frac{V_o}{V_i} = -4.32$$

b) small signal equivalent ckt



$$V_{G0} = -g_m V_{GS} (2.2K \parallel 10K) \quad ; \quad g_m = 5.5 \text{ mS}$$

$$V_{GS} = V_i$$

$$\therefore A_v = \frac{V_o}{V_i} = -9.9$$