

EE 420/ECG 620

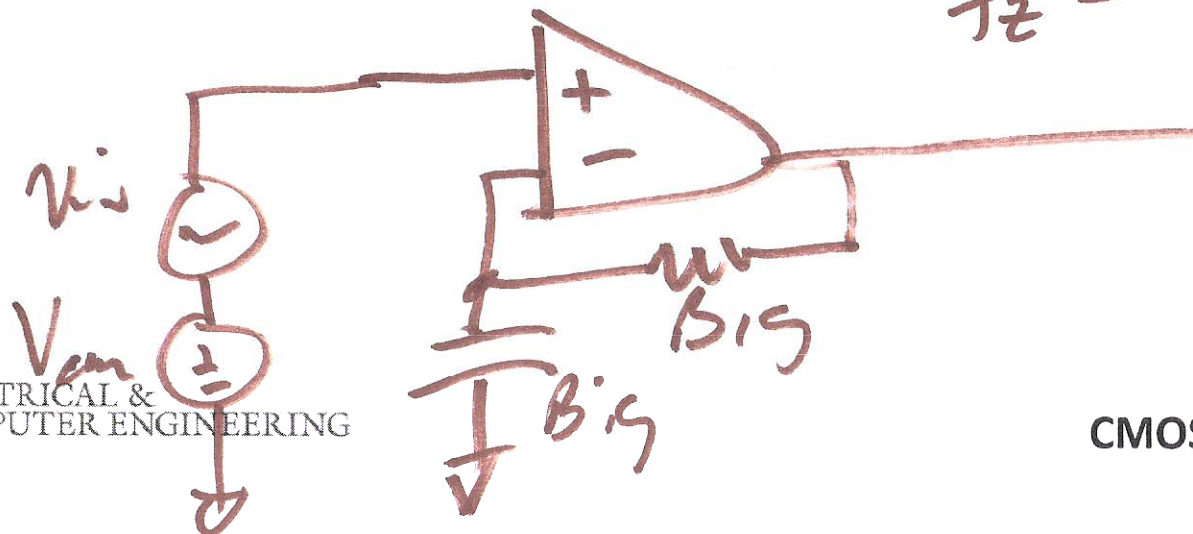
Engr. Electronics II

Analog IC Design

April 20, 2015

$$g_m = k_p \cdot \frac{W}{L} \cdot K \cdot (V_{GS} - V_{TH})$$

$$f_z =$$

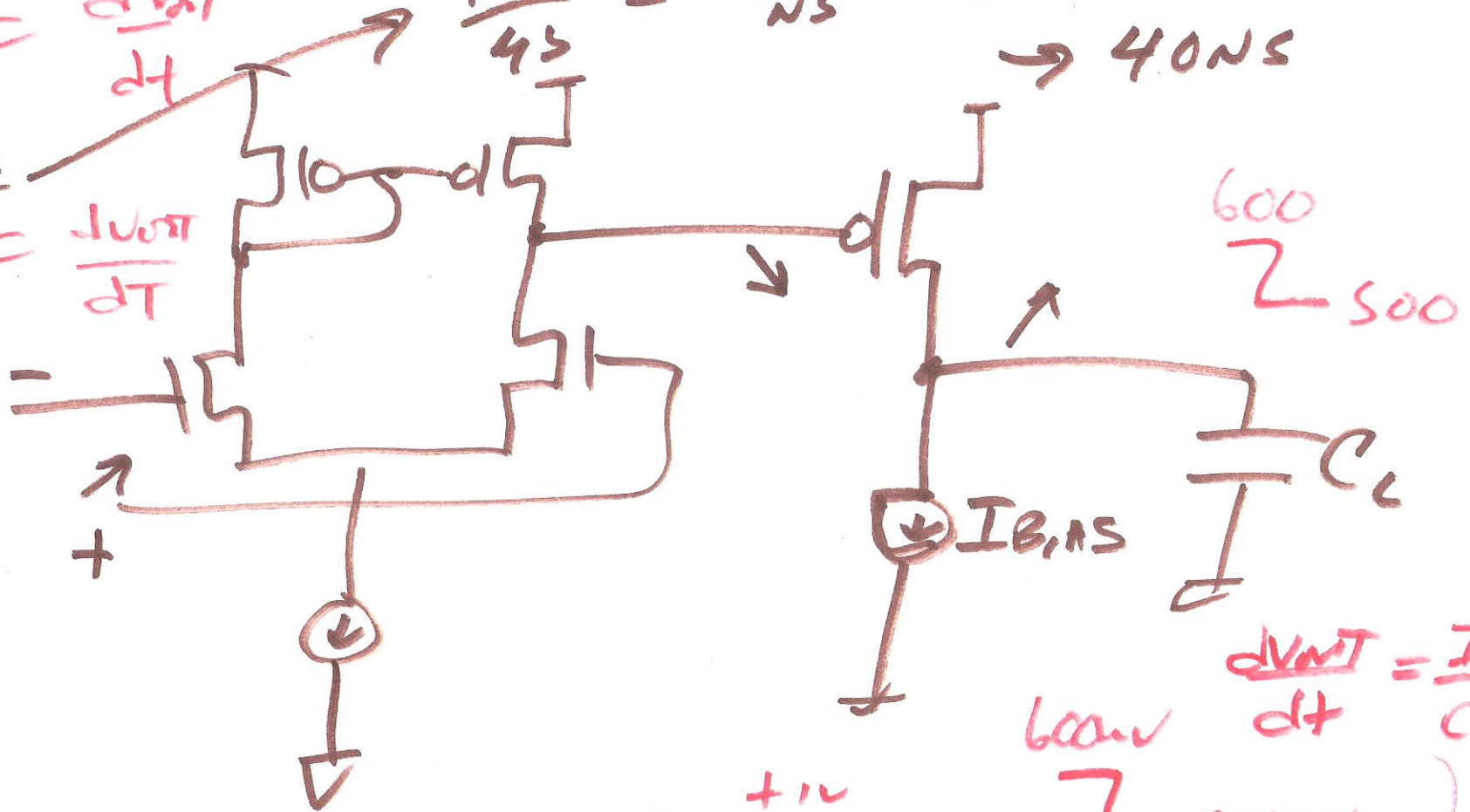


output stage slew-limited

$$\frac{I_{bias}}{C_L} = \frac{dV_{AT}}{dt}$$

$$\frac{10V}{4s} = \frac{10mV}{ns} \rightarrow 400mV$$
$$\rightarrow 40ns$$

$$\left(\frac{104}{1 \text{ pF}} \right) = \frac{dV_{out}}{dt}$$



~~100V~~
~~45~~

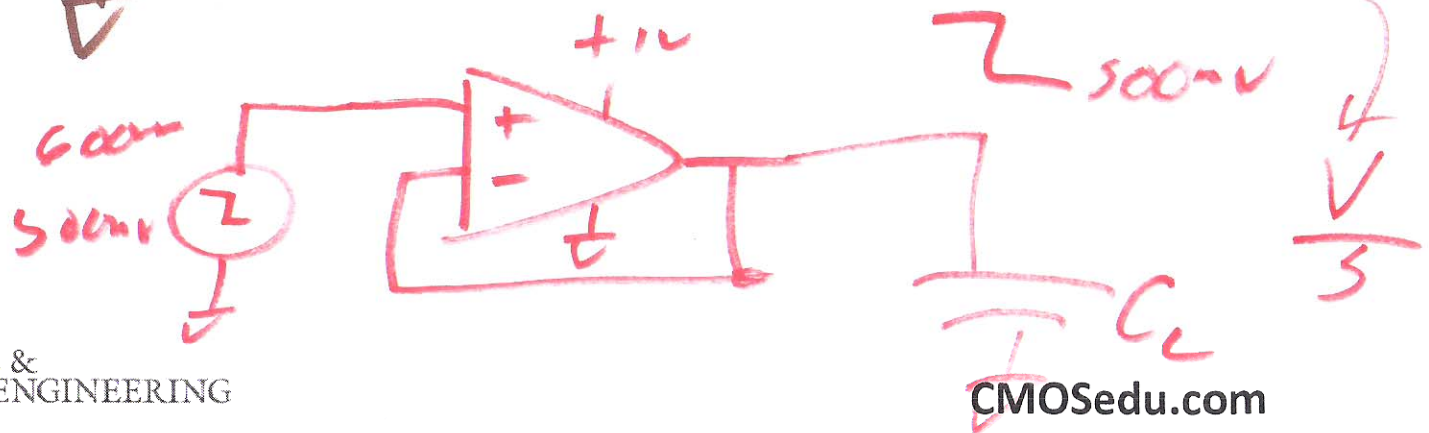
~~100%~~
NS

~~$1 \text{ pF} = 100 \text{ nV}$~~
 ~~10μ~~

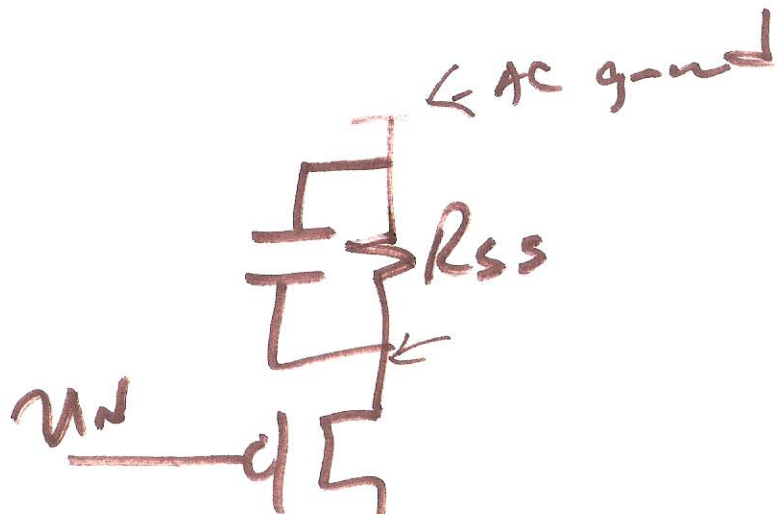
$$\frac{dV_{NT}}{dt} = \frac{I_{AIN}}{C_L}$$

$$L_{500\text{-V}}$$

$$\frac{4}{5}$$



2)



$$\frac{u_{OUT}}{u_{in}} = \frac{-R_D}{R_{ss} + 1/g_m}$$



$$SR = \frac{I_{SS}}{C_c}$$

$$\frac{d}{dt} A \sin 2\pi f \cdot t$$

