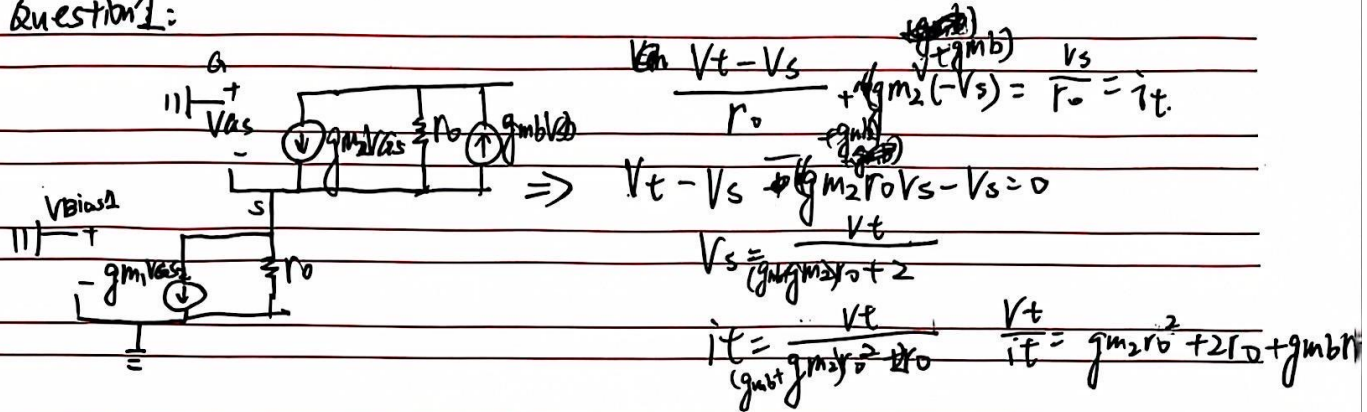


上海交通大学

VE311 Hw6.

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Question 1:



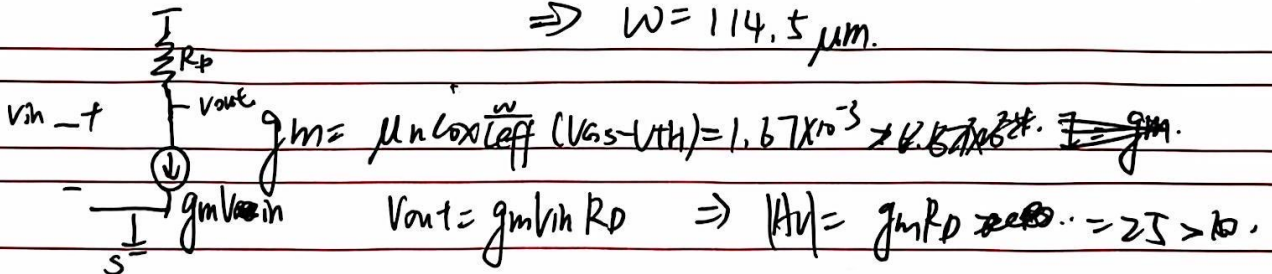
Question 2:

$$I_D = \frac{1}{2} \mu_n C_{ox} \frac{W}{L_{eff}} (V_{GS} - V_{TH})^2 = \frac{95 - V_{out}}{15000}$$

$$\frac{10^{-8} \times 350}{9 \times 10^{-9}} \frac{8.85 \times 10^{-12} \times 3.9}{9 \times 10^{-9}}$$

$$V_{GS} - V_{TH} = 0.9V - 0.7V = 0.2V$$

$$\Rightarrow W = 114.5 \mu m$$



So $W = 114.5 \mu m$ is valid

