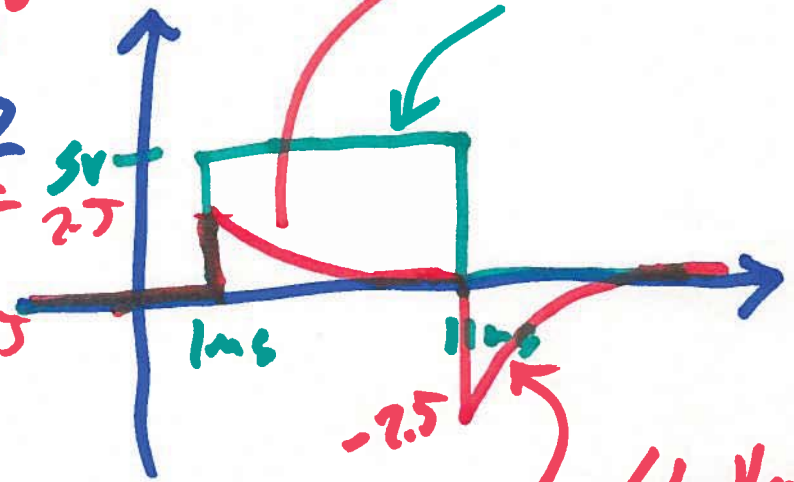
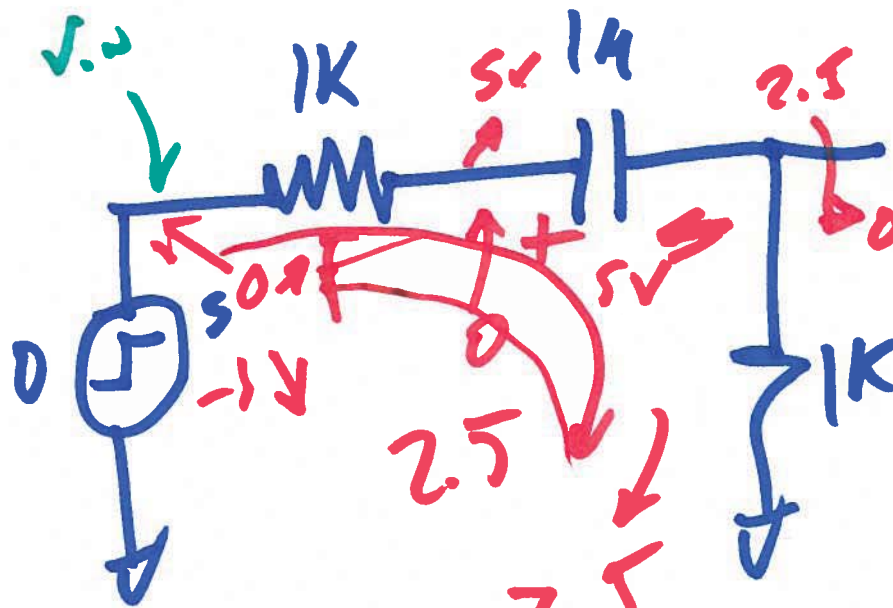


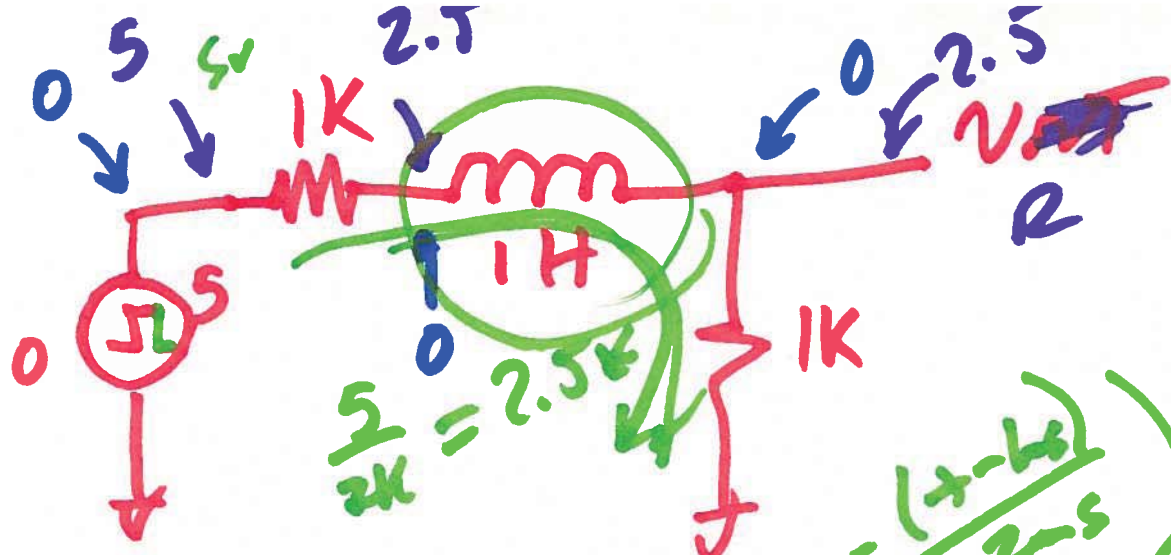
EE 220

Circuits 1

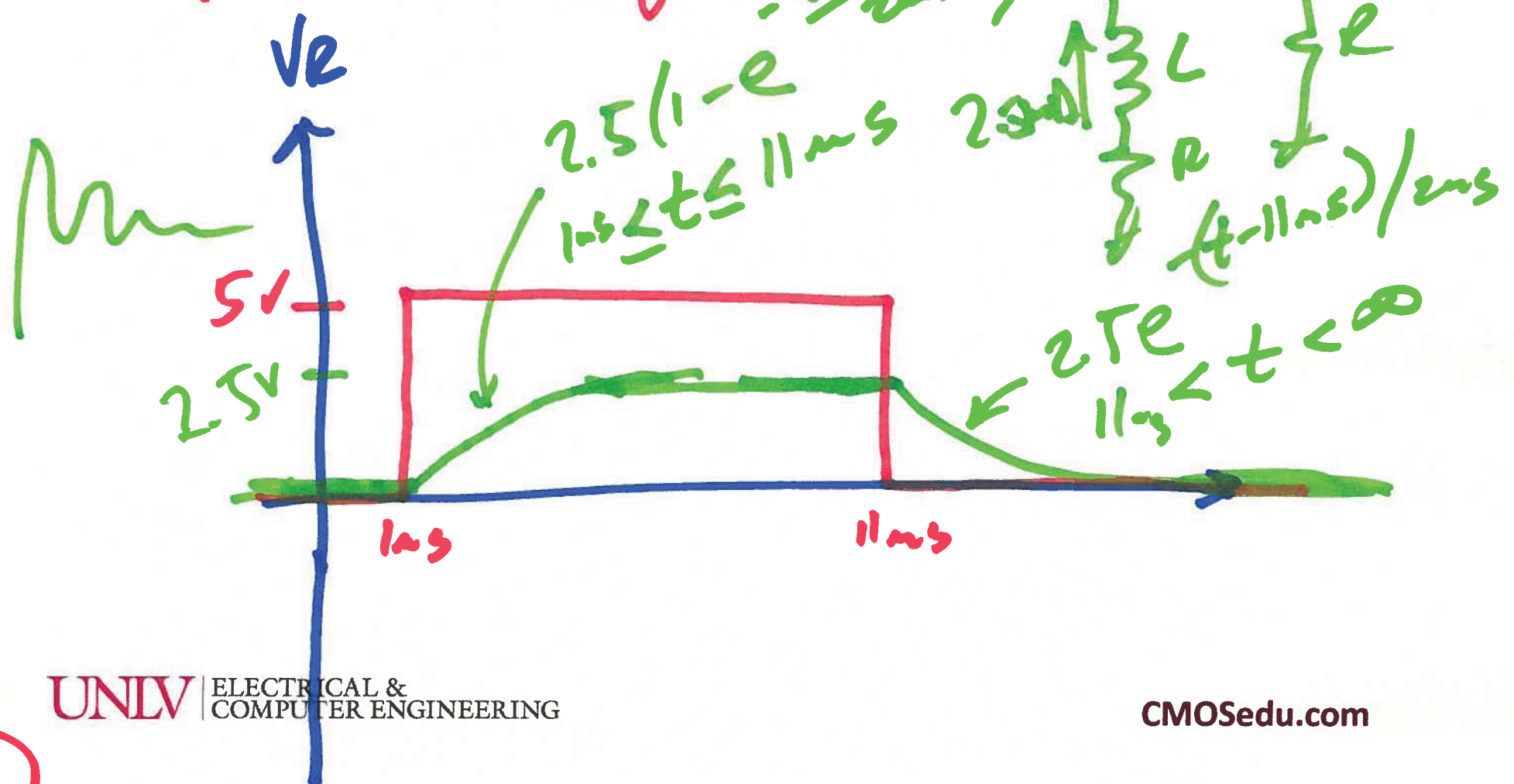
Lecture 20



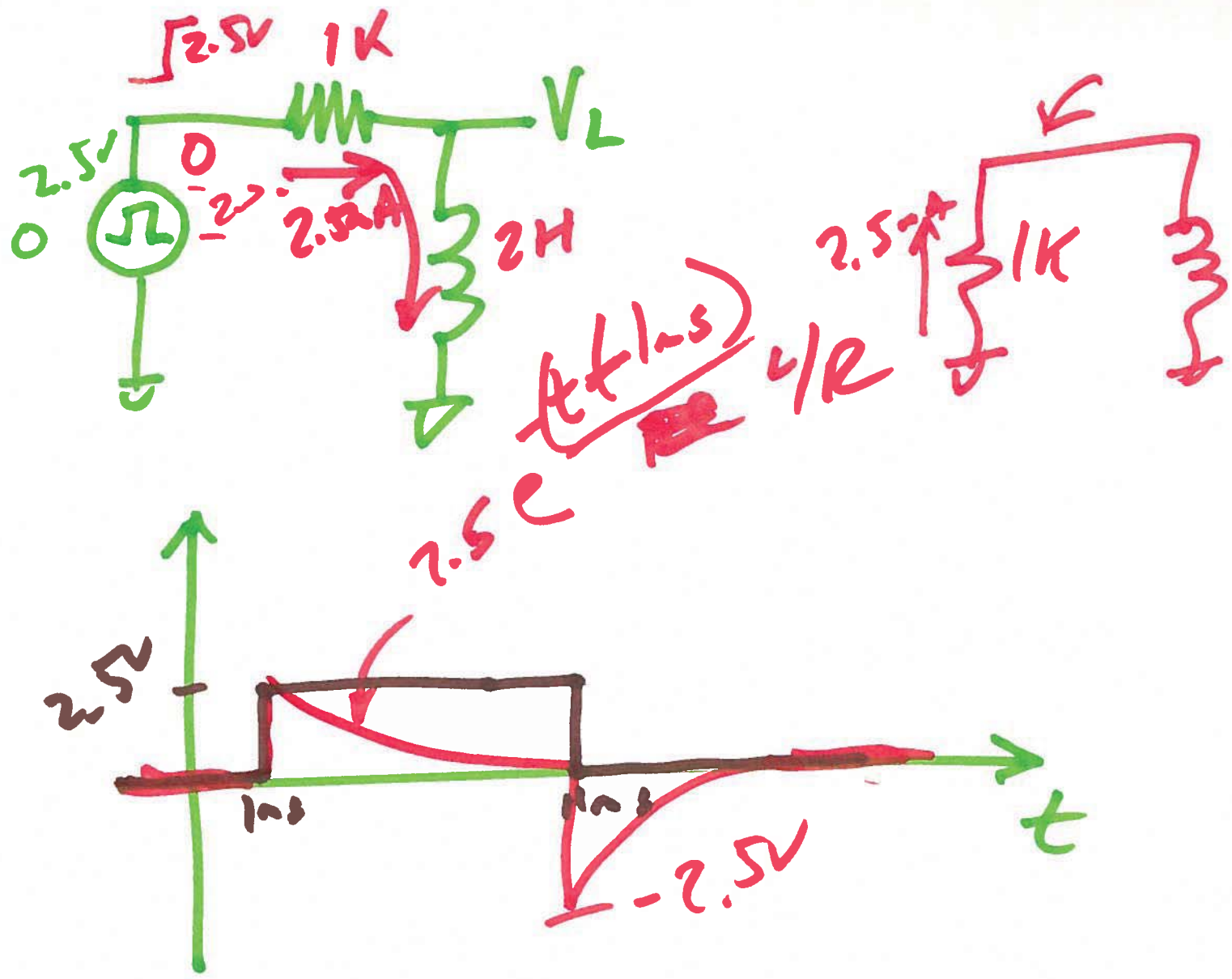
$\tau = 2ns - 2.5e^{-\frac{(t-11ns)}{2ns}}$
 $2.5 - (-2.5) = 5$



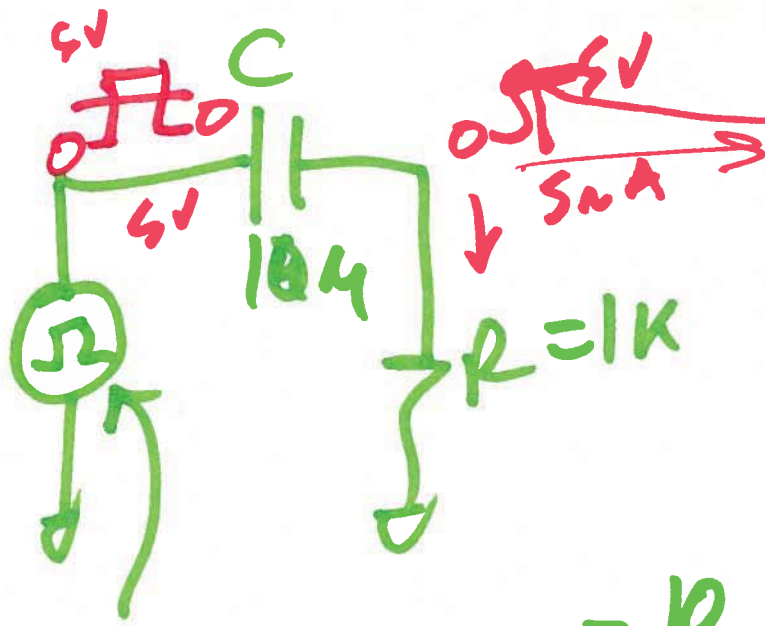
$\tau = 2\text{ms}$



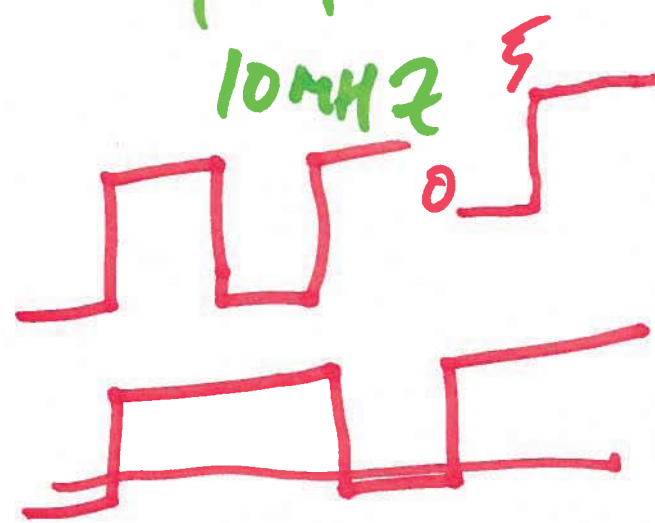
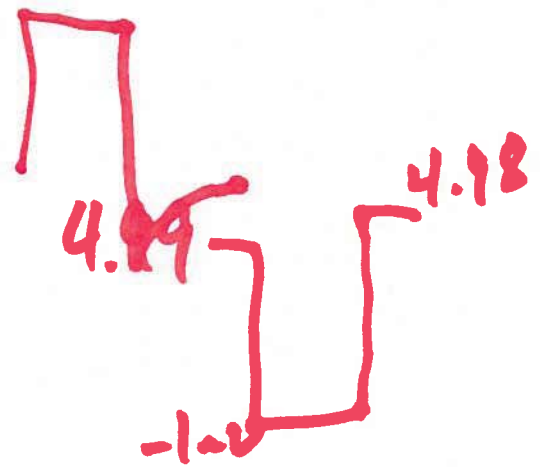
2)



3)

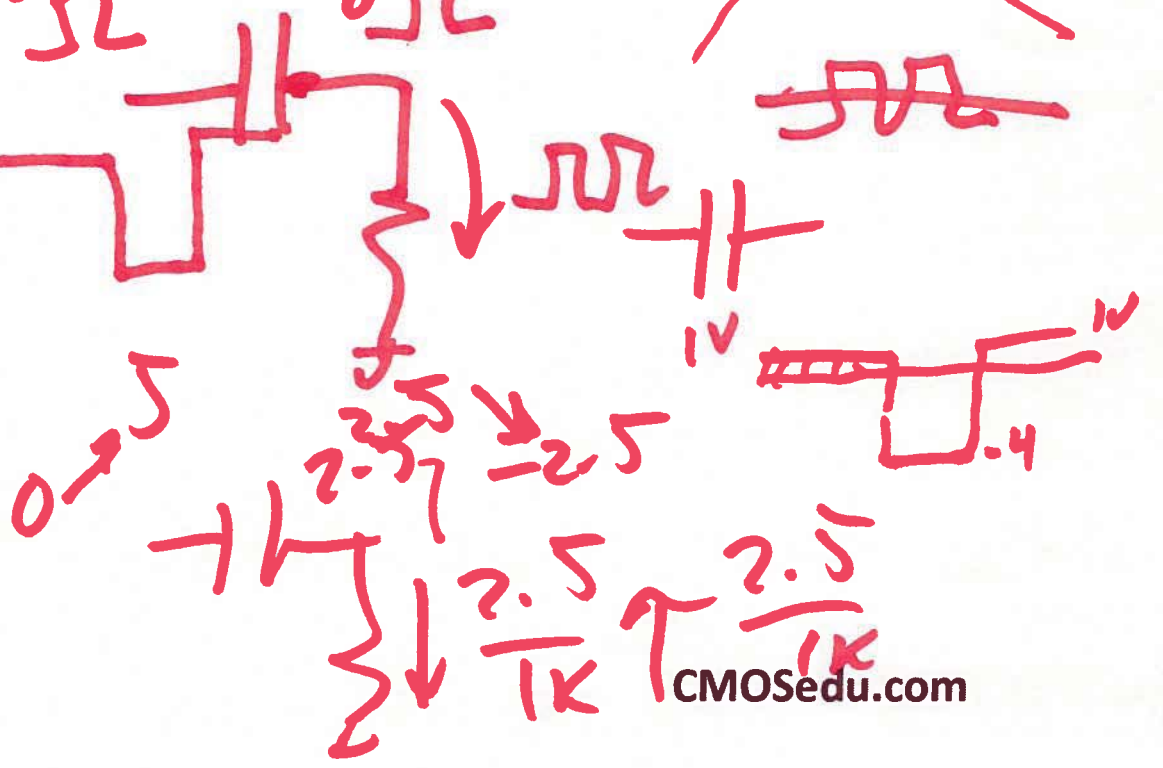


$\tau = 12s$



0.5Ω

0.5Ω

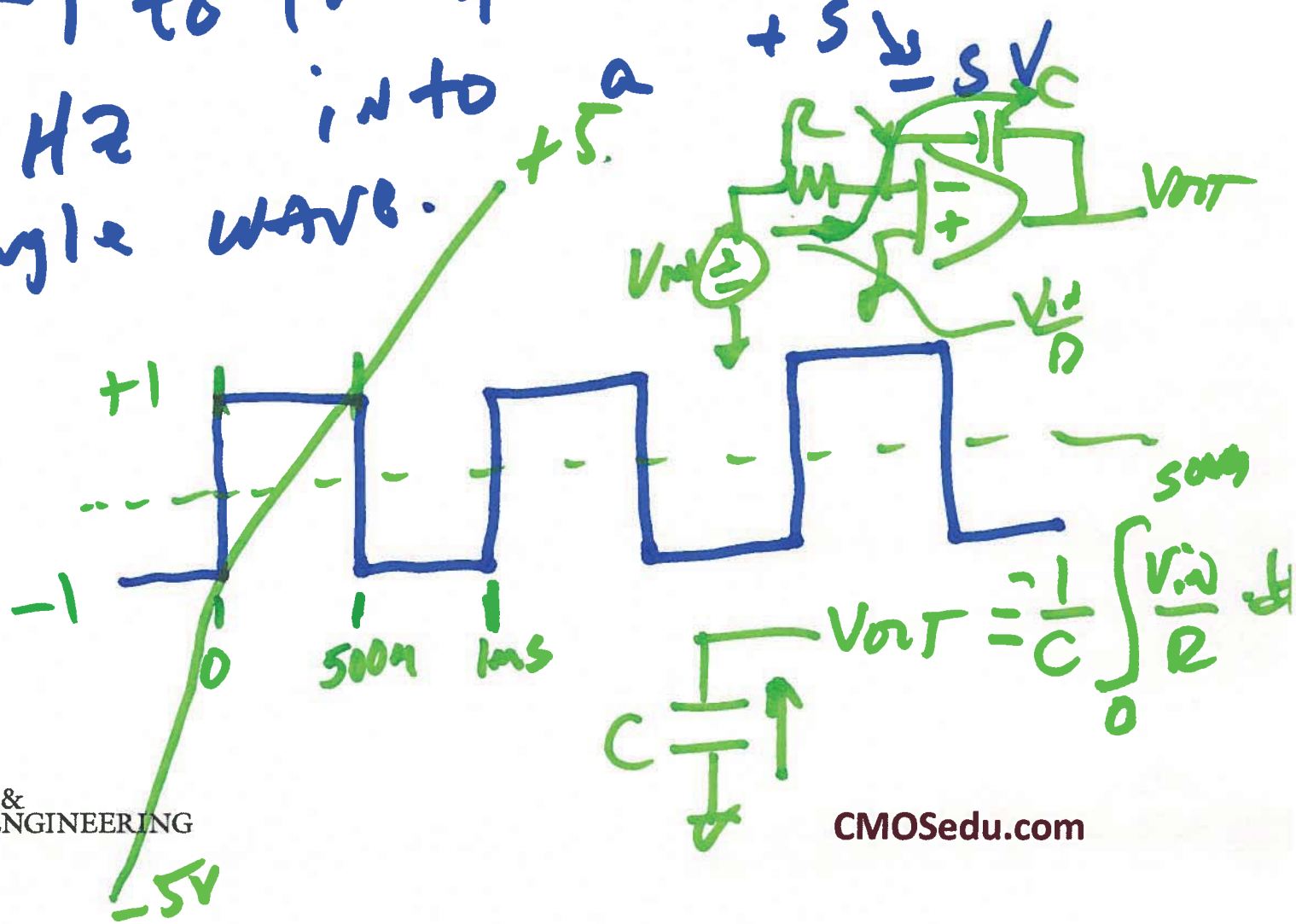


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4)

Integrators

Design a triangle wave generator that converts a -1 to 1V square wave at 1K Hz into a triangle wave.



5)

$$10V = \frac{Q}{C} \int_0^{500\mu} \frac{1}{R} \cdot dt$$

$$10V = \frac{1}{RC} (t \uparrow^{500\mu} - 0)$$

$$RC = 50\mu$$

$$R = 1k$$

$$C = \frac{50\mu}{1k} = 50nF = 0.05\mu F$$