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## Circuit Theory I (16.201): Final Exam Practice A

## Total 25 pts

1. ( 5 pts ) The switch in the circuit has been open for a long time before closed at $\mathrm{t}=0$. Find $v(\mathrm{t})$ for $\mathrm{t} \geq 0$.

2. ( 5 pts ). Find $v(\mathrm{t})$ for $\mathrm{t}>0$. (You may use superposition to find $v(\infty)$ ).

3. (5pts) The switch has been open for a long time before it is closed at $\mathrm{t}=0$. Find $i(\mathrm{t})$ and $i_{\mathrm{x}}(\mathrm{t})$ for $\mathrm{t} \geq 0$.

4. (5pts) The switch has been closed for a long time before it is open at $t=0$. Find $v(t)$ and $v_{R}(t)$ for $t>0$.

5. ( 5 pts$)$ The switch has been closed for a long time before open at $\mathrm{t}=0$. Find $v(\mathrm{t})$ for $\mathrm{t}>0$.

