یا علی

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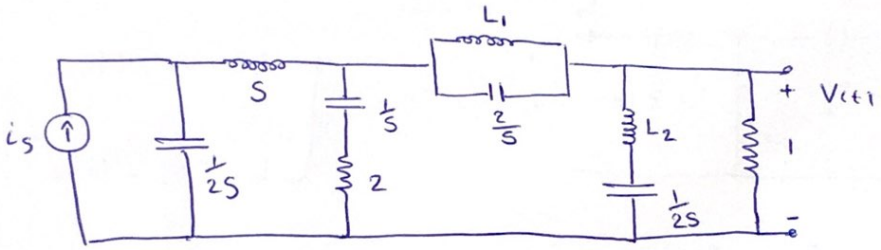
۹۸۱۴۳۰۳
امتحان پایانترم مدار ۲

$i_s = 2\sin(t) + 5\cos(2t)$

#2



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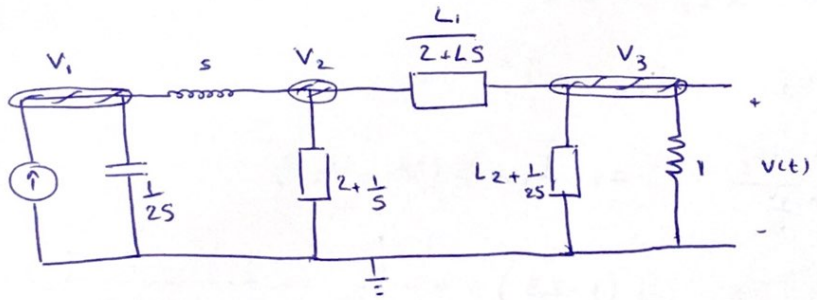

$$\begin{bmatrix} \frac{1}{S}+2S & -\frac{1}{S} & 0 \\ -\frac{1}{S} & \frac{1}{S}+\frac{1}{2+\frac{1}{S}}+\frac{2+LS}{L_1} & \frac{-(2+LS)}{L_1} \\ 0 & \frac{1}{S}+\frac{1}{2+\frac{1}{S}}+\frac{2+LS}{L_1} & 1+\frac{1}{L_2+\frac{1}{2S}}+\frac{2+LS}{L_1} \end{bmatrix} \begin{bmatrix} V_1 \\ V_2 \\ V_3 \end{bmatrix} = \begin{bmatrix} i_s \\ 0 \\ 0 \end{bmatrix}$$

$$V_3 = V(t) = \frac{\begin{vmatrix} \frac{1}{S}+2S & -\frac{1}{S} & i_s \\ -\frac{1}{S} & \frac{1}{S}+\frac{1}{2+\frac{1}{S}}+\frac{2+LS}{L_1} & 0 \\ 0 & \frac{1}{S}+\frac{1}{2+\frac{1}{S}}+\frac{2+LS}{L_1} & 0 \end{vmatrix}}{\begin{vmatrix} \frac{1}{S}+2S & -\frac{1}{S} & 0 \\ -\frac{1}{S} & \frac{1}{S}+\frac{1}{2+\frac{1}{S}}+\frac{2+LS}{L_1} & \frac{-(2+LS)}{L_1} \\ 0 & \frac{1}{S}+\frac{1}{2+\frac{1}{S}}+\frac{2+LS}{L_1} & 1+\frac{1}{L_2+\frac{1}{2S}}+\frac{2+LS}{L_1} \end{vmatrix}}$$