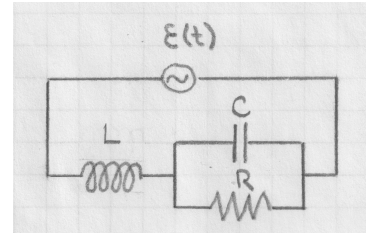
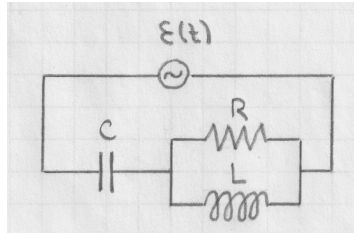
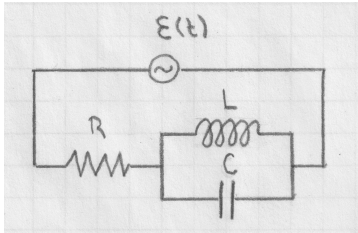


[lex205] AC circuits III

Consider the three AC circuits shown with the following specifications (as defined in [lam28]): $V_{\mathcal{E}} = 15\text{V}$, $\omega = 11\text{rad/s}$, $R = 2\Omega$, $L = 0.17\text{H}$, $C = 0.07\text{F}$. The circuits are discussed in [lam28] as cases #4 (left), #5 (center), #6 (right).

For each case determine the current amplitude $I_{\mathcal{E}}$ in the power source, the current amplitudes I_R^{\max} , I_L^{\max} , I_C^{\max} in each device, and voltage amplitudes V_R^{\max} , V_L^{\max} , V_C^{\max} across each device.

Express all results in SI units.



Solution: