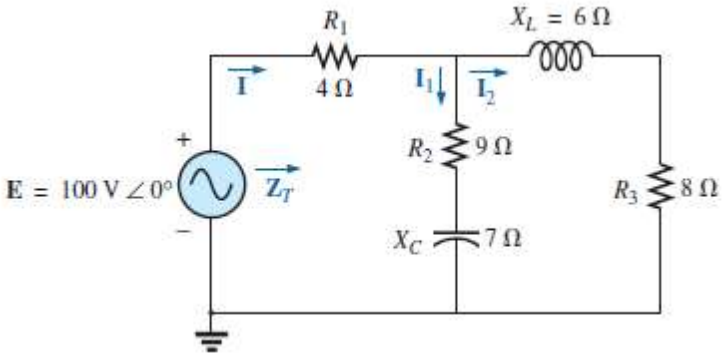
SPRING 2025

Tutorial -06

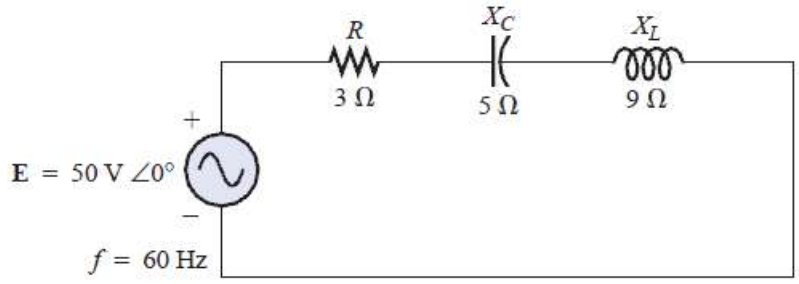
# ECE101: Basic Electrical and Electronic Circuits

Q. 1.




a. Calculate the total impedance $\mathbf{Z}_T$.
b. Compute $\mathbf{I}$.
c. Find the total power factor.
d. Calculate $\mathbf{I}_1$ and $\mathbf{I}_2$.
e. Find the average power delivered to the circuit.

Q. 2. For the network of Figure:




a. Find the average power delivered to each element.

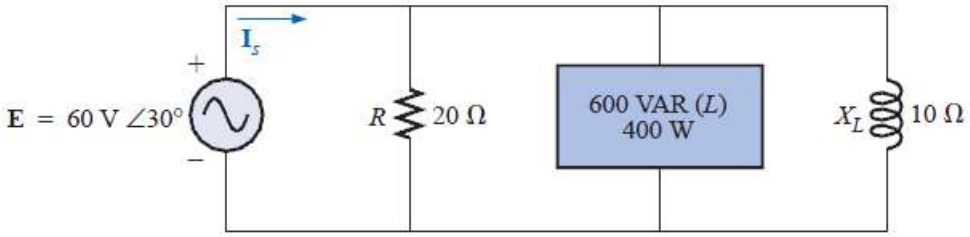
b. Find the reactive power for each element.

c. Find the apparent power for each element.

d. Find the total number of watts, volt-amperes reactive, and volt-amperes, and the power factor $F_p$ of the circuit.

e. Sketch the power triangle.

Q. 3. For the circuit of Figure:



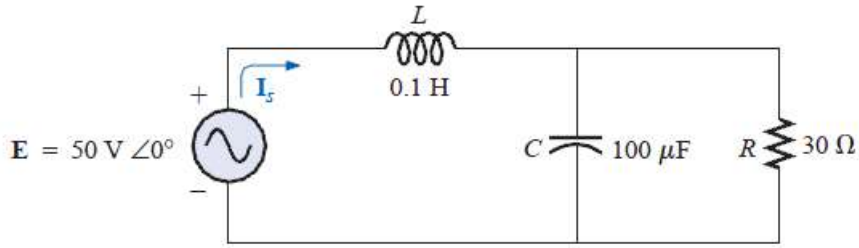

a. Find the average, reactive, and apparent power for the 20-Ω resistor.

b. Repeat part (a) for the 10-Ω inductive reactance.

c. Find the total number of watts, volt-amperes reactive, and volt-amperes, and the power factor Fp.

d. Find the current Is.

Q. 4. For the network of Figure:




ω=400rad/s

a. Find the average power delivered to each element.

b. Find the reactive power for each element.

c. Find the apparent power for each element.

d. Find the total number of watts, volt-amperes reactive, and volt-amperes, and the power factor Fp of the circuit.

e. Sketch the power triangle.