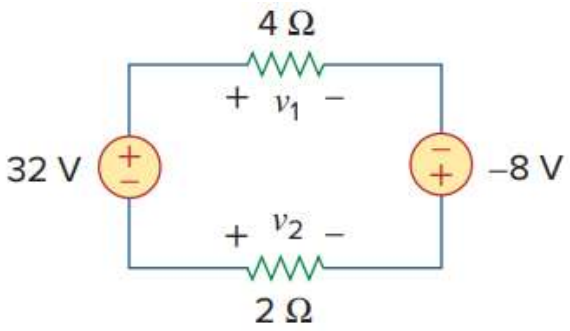
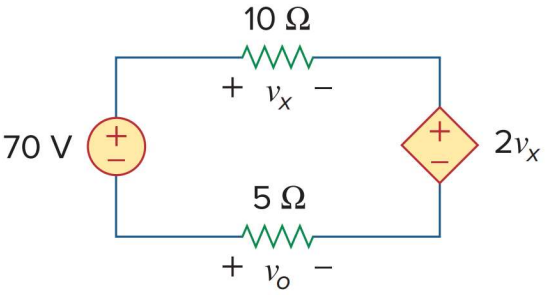
Assignment-1 (Circuits and Systems)

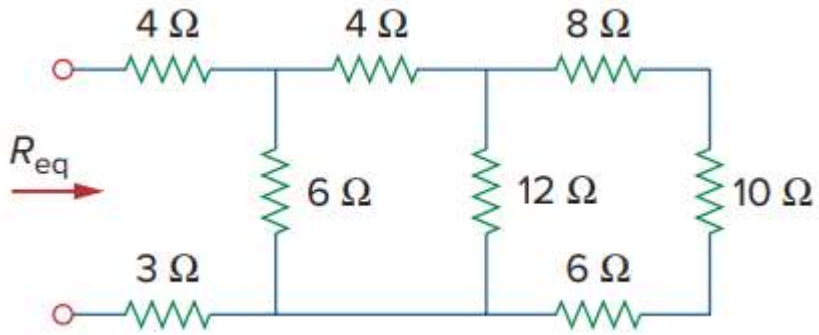
1. Find v_1 and v_2 in the circuit of Fig.



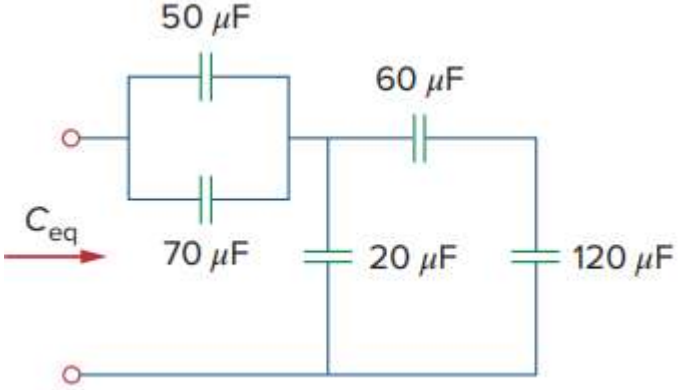
2. Find v_x and v_o in the circuit of Fig.



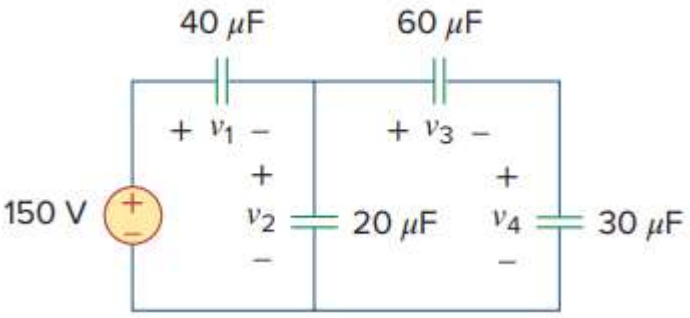
3. By combining the resistors in Fig. find R_{eq}.



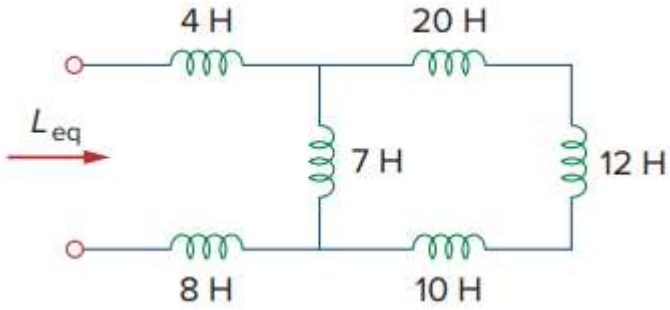
4. Find the equivalent capacitance seen at the terminals of the circuit in Figure.



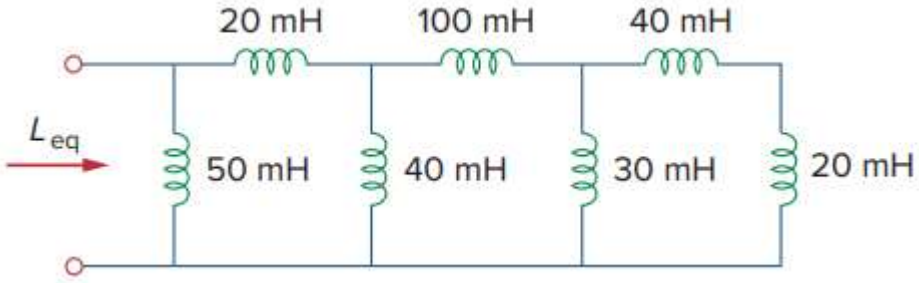
5. Find the voltage across each of the capacitors in Figure.



6. Find the equivalent inductance of the circuit shown in Figure.



7. Calculate the equivalent inductance for the inductive ladder network in Figure.



8. Define electricity and electronics in your own words. Highlight the key differences between the two terms.

9. Choose a specific electronic device or system and explain how electronics contribute to its functionality. Highlight the role of electronic components.

10. Explain the scope of electricity and electronics, providing examples of applications for each.