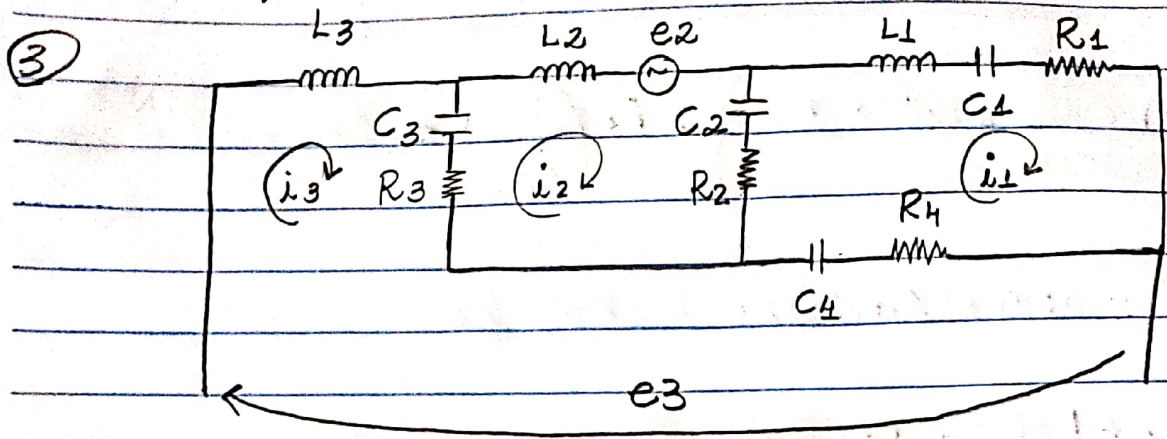


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$$i_1 \left(R_1 + R_4 + R_2 + \frac{1}{C_1 D} + \frac{1}{C_4 D} + \frac{1}{C_2 D} + L_1 D \right) - i_2 \left(\frac{1}{C_2 D} + R_2 \right) - i_3 \left(\frac{1}{C_4 D} + R_4 \right) = 0$$

$$\rightarrow m_1 \ddot{x}_1 + (b_1 + b_2 + b_4) \dot{x}_1 + (k_1 + k_2 + k_4) x_1 - b_2 \dot{x}_2 - k_2 x_2 - b_4 \dot{x}_3 - k_4 x_3 = 0$$

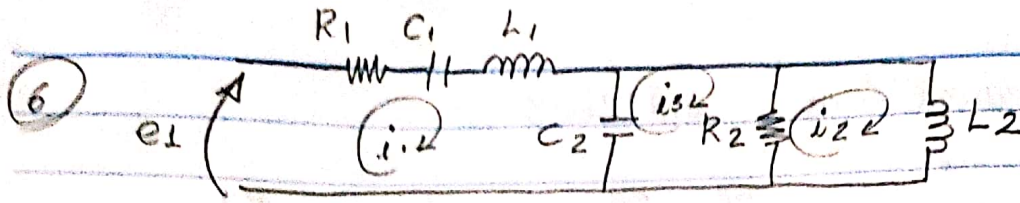
$$i_2 \left(R_2 + R_3 + \frac{1}{C_2 D} + \frac{1}{C_3 D} + L_2 D \right) - i_1 \left(\frac{1}{C_2 D} + R_2 \right) - i_3 \left(\frac{1}{C_3 D} + R_3 \right) = e_2$$

$$\rightarrow m_2 \ddot{x}_2 + (b_2 + b_3) \dot{x}_2 - b_2 \dot{x}_1 + (k_2 + k_3) x_2 - k_2 x_1 - b_3 \dot{x}_3 - k_3 x_3 = f_2$$

$$i_3 \left(\frac{1}{C_3 D} + R_3 + L_3 D + R_4 + \frac{1}{C_4 D} \right) - i_2 \left(R_3 + \frac{1}{C_3 D} \right) - i_1 \left(\frac{1}{C_4 D} + R_4 \right) = e_3$$

$$\rightarrow m_3 \ddot{x}_3 + (b_3 + b_4) \dot{x}_3 - b_3 \dot{x}_2 - b_4 \dot{x}_1 + (k_3 + k_4) x_3 - k_3 x_2 - k_4 x_1 = f_3$$

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$$i_1 \left(R_1 + \frac{1}{C_1 D} + L_1 D + \frac{1}{C_2 D} \right) - i_3 \left(\frac{1}{C_2 D} \right) = e_1$$

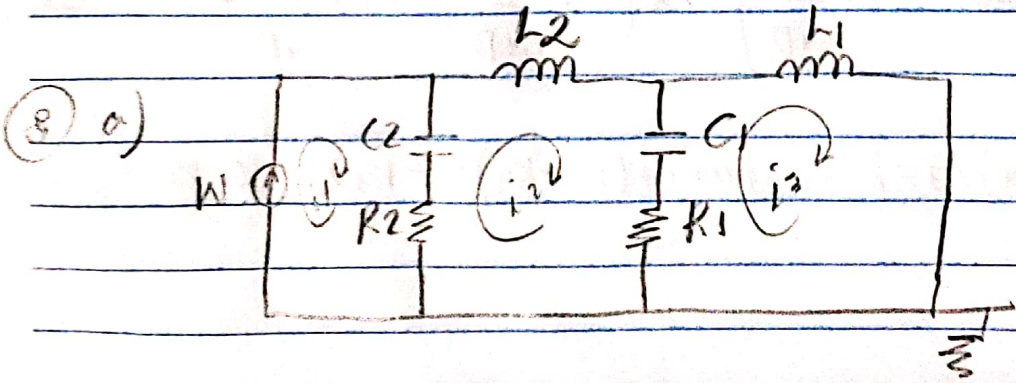
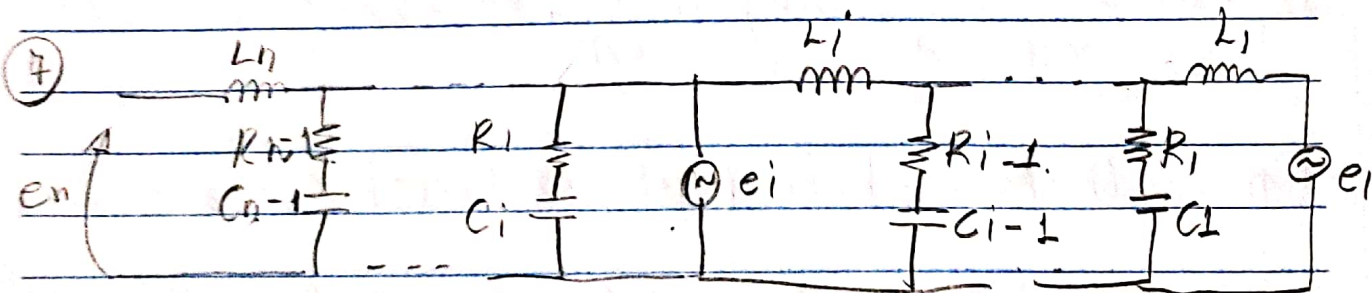
$$\rightarrow m_1 \ddot{x}_1 + b_1 \dot{x}_1 + (K_1 + K_2)x_1 - K_2 x_3 = f_1$$

$$i_2 (R_2 + L_2 D) - i_3 (R_2) = 0$$

$$\rightarrow m_2 \ddot{x}_2 + b_2 \dot{x}_2 - b_2 \dot{x}_3 = 0$$

$$i_3 \left(\frac{1}{C_2 D} + R_2 \right) - i_1 \left(\frac{1}{C_2 D} \right) - i_2 (R_2) = 0$$

$$\rightarrow b_2 \dot{x}_3 + K_2 x_3 - K_2 x_1 - b_2 \dot{x}_2 = 0$$

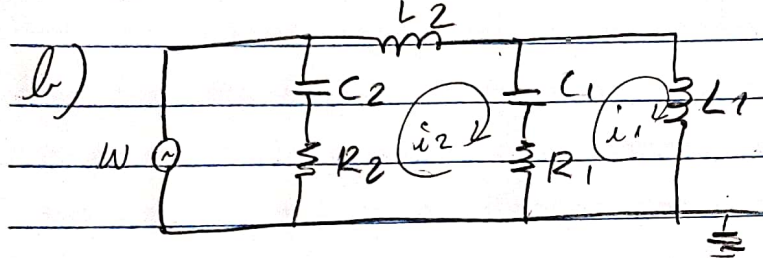


$$i_2 \left(\frac{1}{C_2 D} + R_2 + L_2 D + \frac{1}{C_1 D} + R_1 \right) - i_1 \left(\frac{1}{C_2 D} + R_2 \right) - i_3 \left(\frac{1}{C_1 D} + R_1 \right) = 0$$

$$\rightarrow m_2 \ddot{x}_2 + (b_1 + b_2) \dot{x}_2 + (k_1 + k_2) x_2 - b_2 \dot{x}_1 - k_2 x_1 - b_1 \dot{x}_3 - k_1 x_3 = b_2 \dot{w} + k_2 w$$

$$i_3 \left(L_1 D + \frac{1}{C_1 D} + R_1 \right) - i_2 \left(\frac{1}{C_1 D} + R_1 \right) = 0$$

$$\rightarrow m_3 \ddot{x}_1 + b_1 \dot{x}_3 + k_1 x_3 - k_1 x_2 - b_1 \dot{x}_2 = 0$$



$$i_1 \left(L_1 D + \frac{1}{C_1 D} + R_1 \right) - i_2 \left(\frac{1}{C_1 D} + R_1 \right) = 0$$

$$\rightarrow m_1 \ddot{x}_1 + b_1 \dot{x}_1 + k_1 x_1 - b_1 \dot{x}_2 - k_1 x_2 = 0$$

$$i_2 \left(\frac{1}{C_2 D} + R_2 + L_2 D + \frac{1}{C_1 D} + R_1 \right) - i_1 \left(\frac{1}{C_1 D} + R_1 \right) = 0$$

$$\rightarrow m_2 \ddot{x}_2 + (b_1 + b_2) \dot{x}_2 + (k_1 + k_2) x_2 - b_1 \dot{x}_1 - k_1 x_1 = w$$