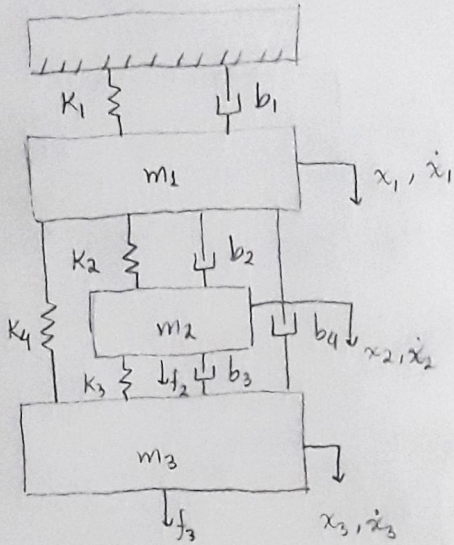Ex. 1
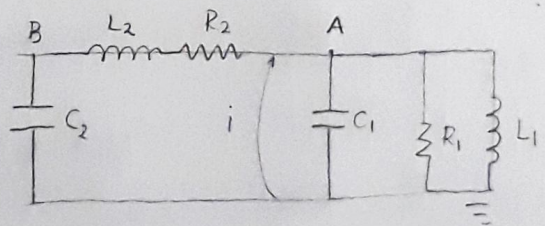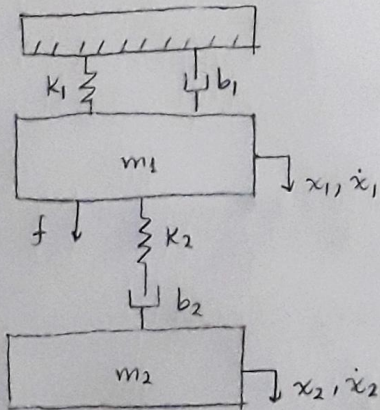

- Nó A: $V_A \cdot \left(C_3 D + \frac{1}{R_3} + \frac{1}{L_2 D} + \frac{1}{R_4} + \frac{1}{L_4 D} \right) - V_B \left(\frac{1}{R_3} + \frac{1}{L_3 D} \right) - V_c \left(\frac{1}{R_4} + \frac{1}{L_4 D} \right) = i_3 \, ;$

- Nó B: $V_B \left(C_2 D + \frac{1}{R_2} + \frac{1}{L_2 D} + \frac{1}{R_3} + \frac{1}{L_3 D} \right) - V_A \left(\frac{1}{R_3} + \frac{1}{L_3 D} \right) - V_c \left(\frac{1}{R_2} + \frac{1}{L_2 D} \right) = i_2 \, ;$

- Nó C: $V_c \left(C_1 D + \frac{1}{R_1} + \frac{1}{L_1 D} + \frac{1}{R_4} + \frac{1}{L_4 D} \right) - V_A \left(\frac{1}{R_4} + \frac{1}{L_4 D} \right) - V_B \left(\frac{1}{R_2} + \frac{1}{L_2 D} \right) = 0 \, .$
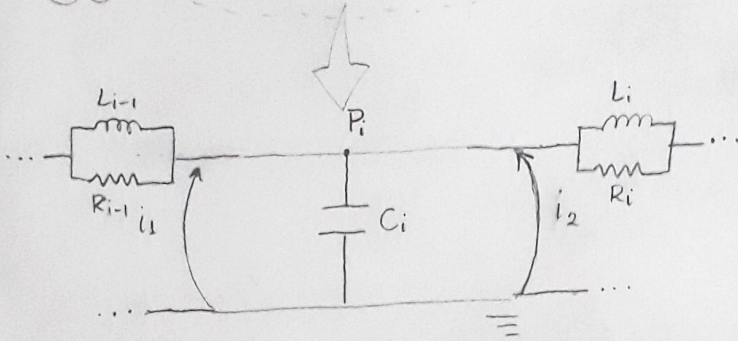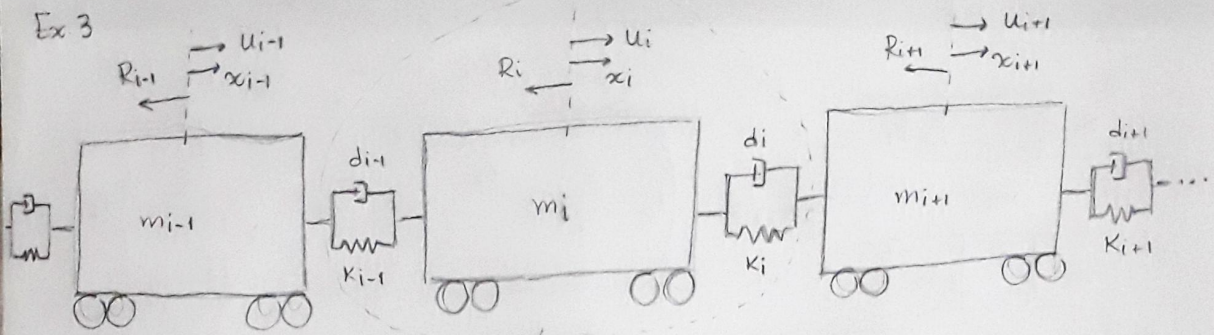
Ex. 2

- Nó A: $V_A \left(C_1 D + \frac{1}{R_1} + \frac{1}{L_1 D} \right) - V_B \left(L_2 D + R_2 \right) = i \, ;$

- Nó B: $V_B \left(C_2 D + R_2 + L_2 D \right) - V_A \left(L_2 D + R_2 \right) = 0 \, .$

Ex 3

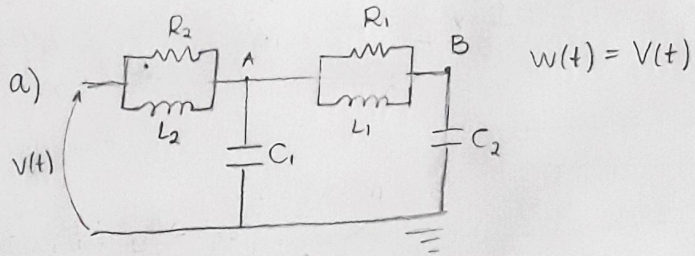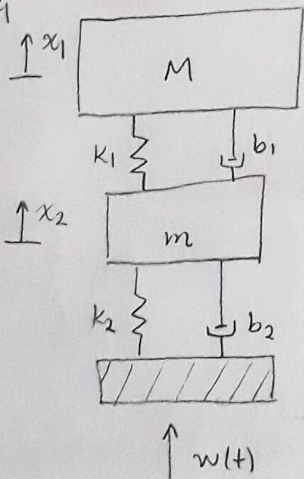$\cdot$ Nó P_i : $V_{P_i}\left(C_iD + \dfrac{1}{L_{i-1}} + \dfrac{1}{R_{i-1}} + \dfrac{1}{L_i} + \dfrac{1}{R_i}\right) - V_{P_{i-1}}\left(\dfrac{1}{L_{i-1}} + \dfrac{1}{R_{i-1}}\right) - V_{P_{i+1}}\left(\dfrac{1}{L_i} + \dfrac{1}{R_i}\right) = i_1 - i_2 \; ;$
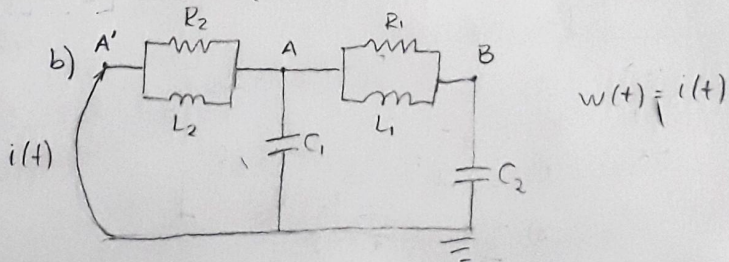
$\cdot$ Nó $P_{i+1} = \ldots$

$\vdots$

Ex 4

a) $\qquad w(t) = V(t)$

$\cdot$ Nó A : $V_A\left(C_1D + \dfrac{1}{R_2} + \dfrac{1}{L_2D} + \dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) - V(t)\cdot\left(\dfrac{1}{R_2} + \dfrac{1}{L_2D}\right) - V_B\left(\dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) = 0$

$\cdot$ Nó B : $V_B\left(C_2D + \dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) - V_A\left(\dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) = 0$

b) $\qquad w(t) = i(t)$

$\cdot$ Nó A' : $V_{A'}\left(\dfrac{1}{R_2} + \dfrac{1}{L_2D}\right) - V_A\left(\dfrac{1}{R_2} + \dfrac{1}{L_2D}\right) = i(t) \; ;$

$\cdot$ Nó A : $V_A\left(C_1D + \dfrac{1}{R_1} + \dfrac{1}{L_1D} + \dfrac{1}{R_2} + \dfrac{1}{L_2D}\right) - V_{A'}\left(\dfrac{1}{R_2} + \dfrac{1}{L_2D}\right) - V_B\left(\dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) = 0 \; ;$

$\cdot$ Nó B : $V_B\left(C_2D + \dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) - V_A\left(\dfrac{1}{R_1} + \dfrac{1}{L_1D}\right) = 0 .$