When t < 0,  $v_s = V_0$ 

When t > 0,  $v_s = V_1$ 

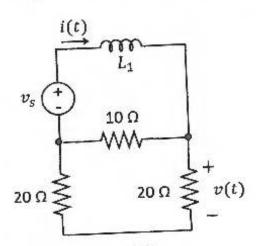
Find  $i(t) = A_1 + B_1 \cdot e^{-t/\tau_1}$  for t > 0

and  $v(t) = A_2 + B_2 \cdot e^{-t/\tau_2}$  for t > 0

V0:40 V

V1:64 V

L1:2 mH



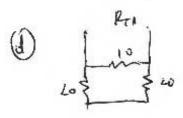
(a) 
$$t = 0^{-\frac{1}{20}}$$
 $20 = \frac{10}{20}$ 
 $30 = \frac{10}{20}$ 

(b) E=0+ 644

$$C(o^*) = 5A$$
  
 $C(o^*) = (5A) \cdot (10/(40)) \frac{20}{20 \times 20} = 20V$ 

$$\dot{c}(\omega) = \frac{\dot{c}4}{10/140} = 8A$$

$$v(\omega) = \dot{c}4 \cdot \frac{20}{20 + 20} = 32V$$



$$R_{TH} = 10/140 = 8.2$$

$$C = \frac{L}{R_{TH}} = \frac{2.16^{-3}}{8} = 0.25.10^{-3}$$

$$A_{1} = \mathcal{L}(3) \Rightarrow \begin{bmatrix} A_{1} = 8A \end{bmatrix} \qquad A_{2} = \mathcal{U}(4) \Rightarrow \begin{bmatrix} A_{2} = 32V \end{bmatrix}$$

$$B_{1} + A_{3} = \mathcal{L}(0^{\dagger}) \Rightarrow \begin{bmatrix} B_{1} = -3A \end{bmatrix} \qquad B_{2} + A_{2} = \mathcal{V}(0^{\dagger}) \Rightarrow \begin{bmatrix} B_{2} = -12V \end{bmatrix}$$

$$A_2 = v(\omega) \Rightarrow A_2 = 32V$$

$$B_2 + A_2 = v(o^{\dagger}) \Rightarrow B_2 = -12V$$