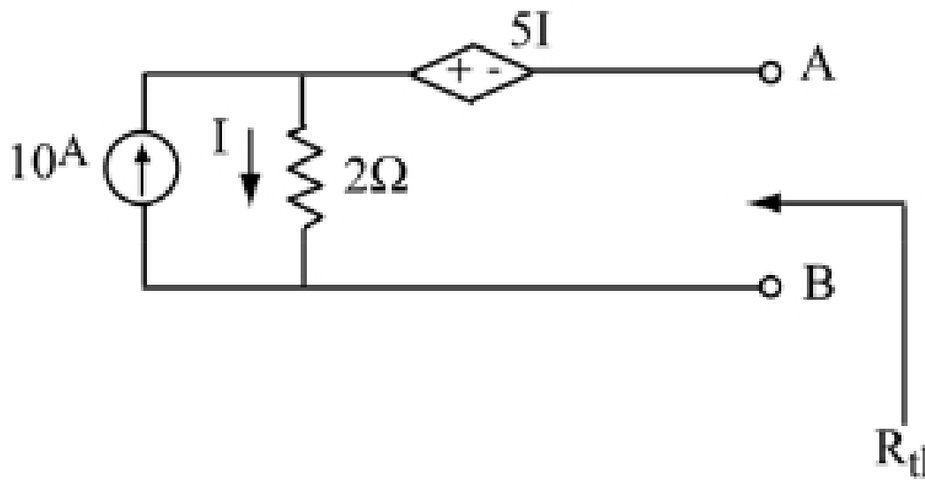
Problem 1

Find the Thevenin equivalent resistance R_{th} for the circuit below at terminals A-B.

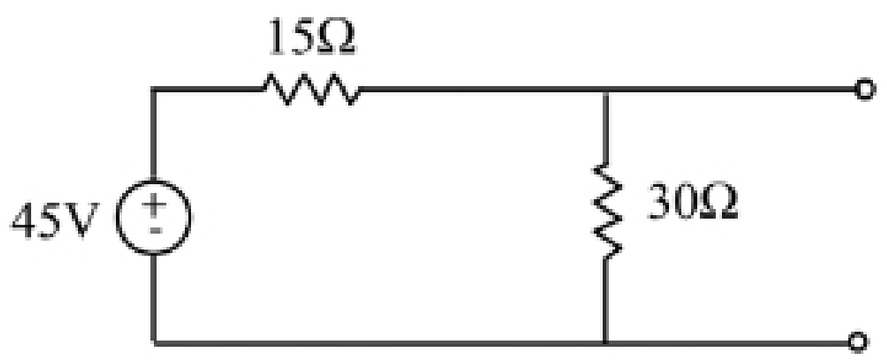
(a) $-7\ \Omega$ (b) $-3\ \Omega$ (c) $2\ \Omega$ (d) $3\ \Omega$ (e) $7\ \Omega$



Problem 2

For the circuit below, the short-circuit current I_{sc} in the Norton equivalent circuit is

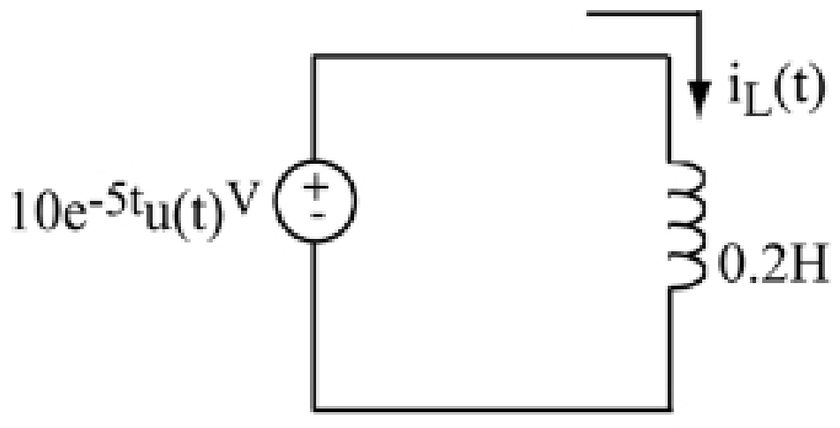
(a) 1 A (b) 2 A (c) 3 A (d) 4 A (e) 5 A



Problem 3

For the inductor circuit below, $i_L(0^-) = 0$. The inductor current $i_L(t)$, in A, is

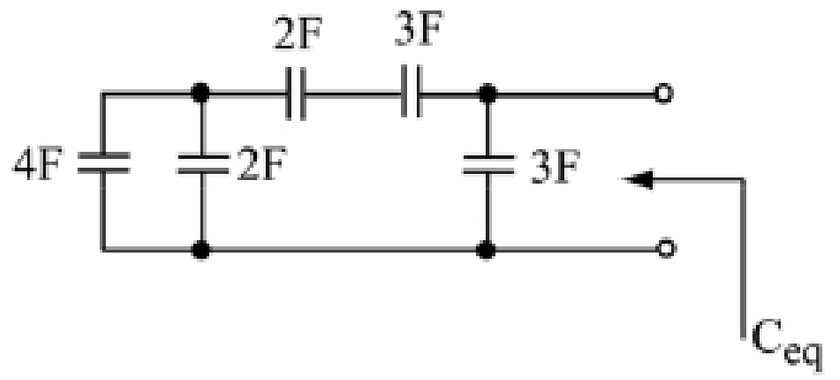
(a) $2-2e^{-5t}$ (b) $10-10e^{-5t}$ (c) $10e^{-5t}-10$ (d) $2e^{-5t}-2$ (e) $50e^{-5t}-50$



Problem 4

The equivalent capacitance C_{eq} for the circuit below is

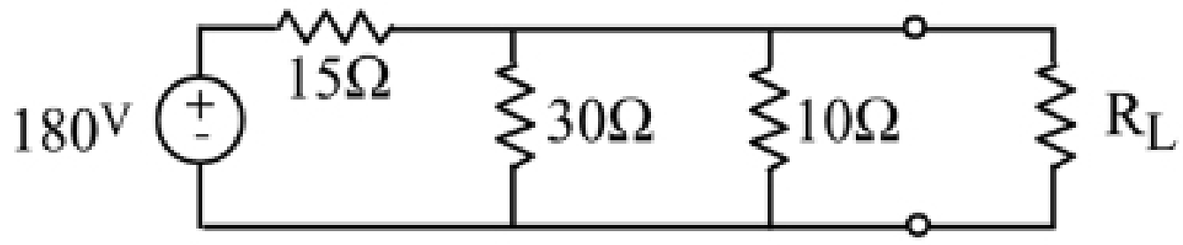
(a) 1 F (b) 2 F (c) 3 F (d) 4 F (e) 5 F



Problem 5

The maximum amount of power is transferred to the load resistor R_L when R_L =

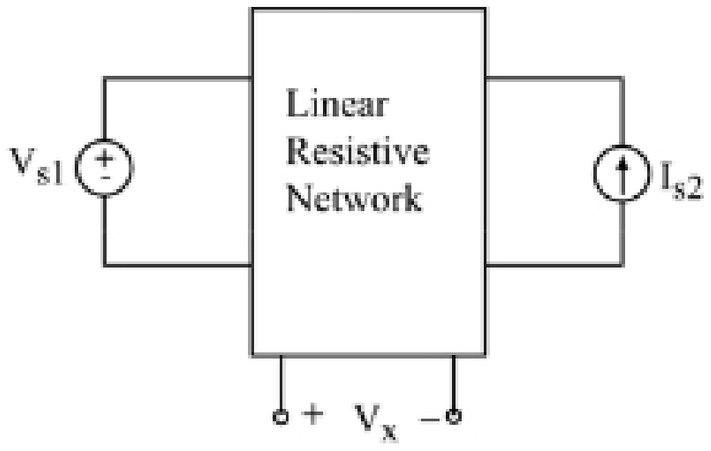
(a) 5 Ω (b) 7.5 Ω (c) 10 Ω (d) 40 Ω (e) 55 Ω



Problem 6

Two sets of measurements were taken for the linear resistive network shown below (see table below). If $V_{s1} = 2V$ and $I_{s2} = 4A$, then V_x =

(a) -2 V (b) 0 V (c) 2 V (d) 5 V (e) 20 V



V_{s1}	I_{s1}	V_x
10 V	0 A	-20 V
0 V	5 A	5 V