Problem Sheet - 1 IEC102

(Q1) A 2-terminal device consumes energy as shown by the waveform in Fig. Q1. The current through the device is $i(t) = 2\cos(4000\pi t)$ A. Find the voltage across the device at $t = 0.5, 1.5, 4.75$, and $6.5$ ms.

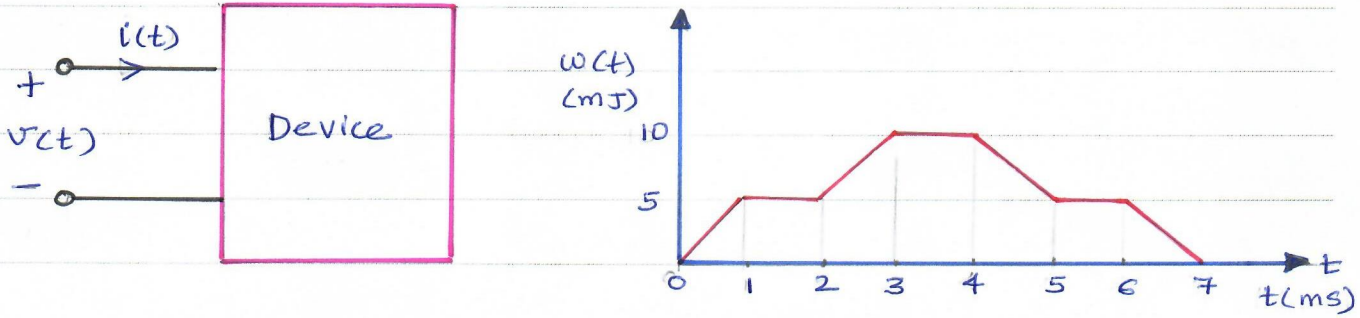


Fig. Q1

(Q2) Find the power absorbed & supplied by the element 3 of the circuit shown in Fig. Q2

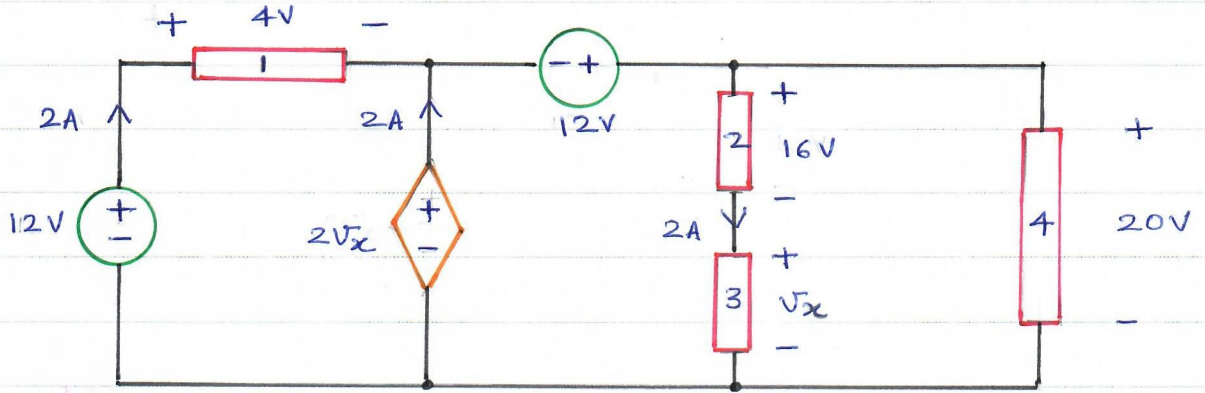


Fig. Q2

(Q3) In the circuit shown in Fig. Q3, compute the power delivered & absorbed by the dependent source.

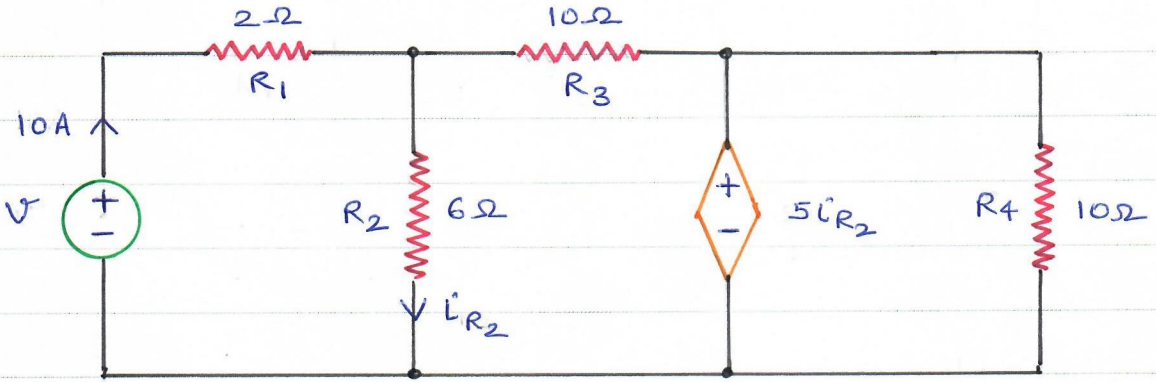


Fig. Q3

(Q4) Find $V_o$ in the circuit shown in Fig. Q4.

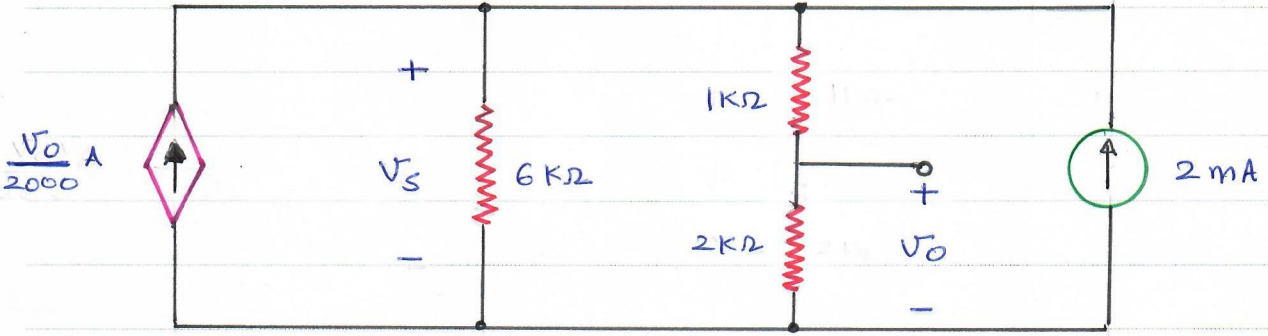


Fig. Q4