Sohag University
Faculty of Engineering
Electrical Engineering Department

## Electric Circuits

First Year_Civil Engineering
SHEET NO 2

Q1) Obtain the equivalent resistance at the terminals a-b for each of the circuits


Q2) a) Find i, v and the power dissipated in the $6 \Omega$ resistor
b) Determine $\mathrm{i}_{1}, \mathrm{i}_{2}, \mathrm{v}_{1}$, and $\mathrm{v}_{2}$ in the ladder network, Calculate the power dissipated in the $2 \Omega$ resistor.


Q3) Use KCL to obtain currents $\mathrm{i}_{1}, \mathrm{i} 2$ and $\mathrm{i}_{3}$ and Use KVL to obtain voltages $\mathrm{v}_{1}, \mathrm{v} 2, \mathrm{v} 3$ and $\mathrm{v}_{4}$ in the circuits


Q4) a) Find $v_{1}, v_{2}$ and $v_{3}$ in the circuits shown below
b) Find $I$ and $V_{a b}$ in the circuit


