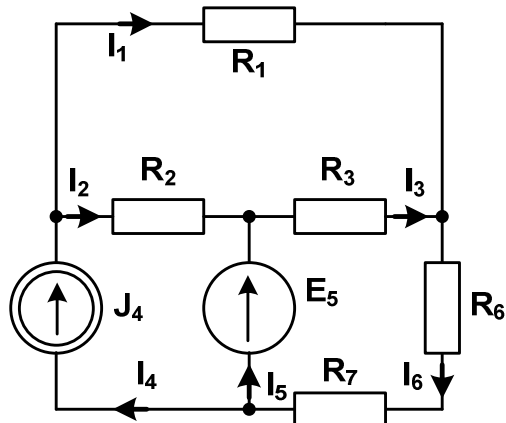
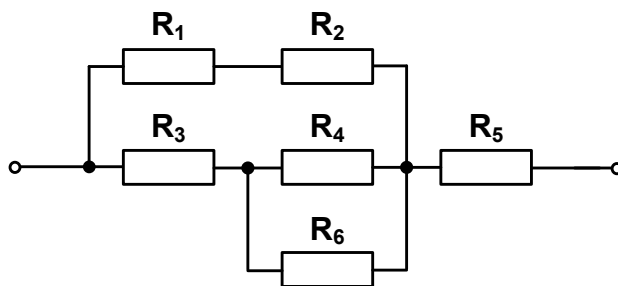


ELECTRICAL CIRCUITS 1 (IS-FEE-10070W) - TEST 1 (EXAMPLE)

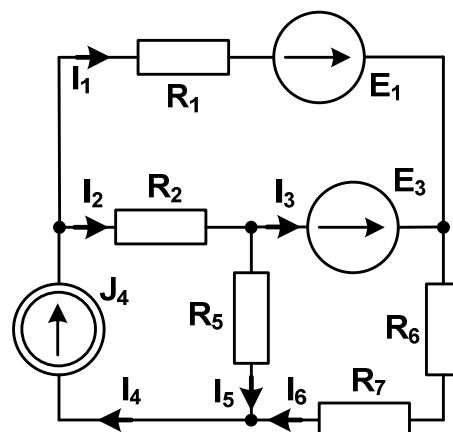
PROBLEM TO BE SOLVED IN A GROUP	Points
<p>1. Calculate the currents in all branches of the circuit presented in the figure using any method.</p> <p>$R_1 = 4 \Omega$, $R_2 = 4 \Omega$, $R_3 = 4 \Omega$, $R_6 = 2 \Omega$, $R_7 = 2 \Omega$, $J_4 = 1 \text{ A}$, $E_5 = 10 \text{ V}$</p>	12



PROBLEMS TO BE SOLVED INDIVIDUALLY	Points
<p>2. Calculate the equivalent resistance of circuit shown below.</p> <p>$R_1 = 1 \Omega$, $R_2 = 5 \Omega$, $R_3 = 6 \Omega$, $R_4 = 10 \Omega$, $R_5 = 6 \Omega$, $R_6 = 15 \Omega$</p>	6



<p>3. Calculate the power dissipated by each resistor in the circuit presented in the figure.</p> <p>$R_1 = 5 \Omega$, $R_2 = 5 \Omega$, $R_5 = 4 \Omega$, $R_6 = 2 \Omega$, $R_7 = 10 \Omega$, $E_1 = 10 \text{ V}$, $E_3 = 20 \text{ V}$, $J_4 = 5 \text{ A}$</p>	22
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Note: 21 points are required to pass the test.