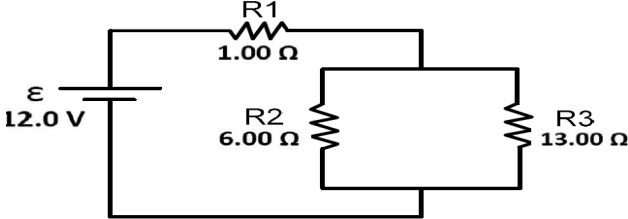
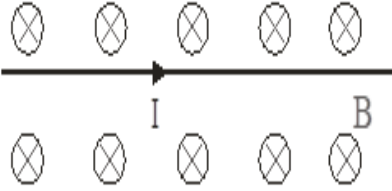
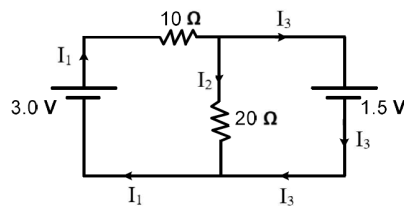


<p>Q1</p>	<p>Consider the circuit shown in the figure. Find the voltage across the R_3 resistor?</p> 
<p>Q2</p>	<p>A metal resistor has resistance of 10 ohm at 0°C and 11 ohms at 160°C, Find the temperature coefficient?</p>
<p>Q3</p>	<p>A wire of 0.14 mm diameter and resistivity 9.6 micro ohm-cm is 440 cm long. Calculate the resistance of the wire?</p>
<p>Q4</p>	<p>If the force per unit length between two long parallel wires ,which carry identical currents and separated by 1m, is $2 \times 10^{-7} \text{ N/m}$, Find the current in each wire?</p>
<p>Q5</p>	<p>If the magnetic force acting on the wire, of 2 m length, carrying electric current of $I = 5 \text{ A}$ is 15 N, Find the magnetic field?</p> 
<p>Q6</p>	<p>A solenoid of 10 m long and 500 turns/m. If the magnetic field at center of the solenoid is 15.7 mT, Find the current passes through the solenoid?</p>
<p>Q7</p>	<p>A long straight wire of radius 20 cm carries a steady current 2A which is uniformly distribute through the cross section of the wire. Calculate the magnetic field at a distance 10 cm from the center of the wire?</p>
<p>Q8</p>	<p>A charged particle beam that is shot horizontally moves into a region where there is a constant magnetic field of magnitude $2.45 \times 10^{-3} \text{ T}$ that pointed straight down. The particles then move in a circular path of radius 2 cm . If they accelerated through a potential difference of 211V , Determine their charge to mass ratio?</p>

Q9	A coil wire is 25 m long . The wire has a diameter of 0.40 mm and carries a current of 0.50 A, What are the electric field and the power dissipated in the wire (the resistivity of the wire $1.5 \times 10^{-6} \Omega \cdot \text{m}$)
Q10	A beam of charged particles of different speeds is going through an area that has an electric field E and a magnetic field B . The electric force is towards one direction, and the magnetic force is towards the opposite direction. Only particles with speed v are having a balance between the two forces. If the electric field is increased to $2E$, then the particles having Zero net force, What is the speed of particles?
Q11	If 75 resistors, each of 50Ω , are connected in parallel, and the total potential dference is 34V , Find the equivlant resistance and current and potential difference across each resistor?
Q12	Consider the circuit shown in the figure below. Find the current I_3 passing through the battery 1.5 V?



The end