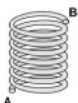


✓ K- What is current? *

1/1

- ☐ the number of electrons moving through a given area.
- ☒ the rate at which electrons move through a given area. ✓
- ☐ resistance divided by potential difference.
- ☐ the money that a country uses.
- ☐ power times potential difference.

✓ K- In the picture to the right, electrons are flowing through the coil from point A to point B. Which way does the magnetic field flow inside the conductor? *1/1



- ☐ Down - bottom of the page.
- ☐ To the right on page
- ☐ Out of the page.
- ☐ Into the page.
- ☒ Up - top of the page. ✓
- ☐ To the left on page

✓ K - What is the energy transferred if 255 V moves a charge of 1.55 C? * 1/1

- ☐ $6.08 \times 10^{-3} \text{ J}$
- ☐ 166 J
- ☐ 257 J
- ☒ 395 J ✓
- ☐ Not enough information.

✓ K - What is resistance? *

1/1

- ☐ Measured in series in a circuit
- ☐ The current divided by the voltage.
- ☒ Larger when the conductor is longer ✓
- ☐ Futile as stated by Locutus
- ☐ Independent of the material

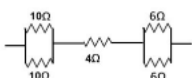
✗ K - An electromagnet consisting of 100. coils of wire, with a current of 1.0A produces a magnetic field of 200. Tesla. The same electromagnet will have a decrease in its magnetic field if it were altered to include *0/1

- ☐ 200 coils
- ☐ lower resistance of the wire
- ☐ increase resistance of the wire
- ☐ 2.0A
- ☒ a ferrous metal core ✗

✓ K - Which of the following correctly describes what happens when several resistors are connected in series? *1/1

- ☐ Electric charge increases.
- ☐ The resistance of each resistor changes as the voltage changes.
- ☐ The inverse of the sum of the resistances is equal to the sum of the inverses of each resistor.
- ☐ The potential difference across each resistor equals the total potential difference.
- ☒ The current across each resistor equals the total current. ✓

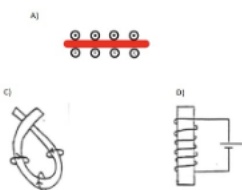
✓ A/T - What is the equivalent resistance (R_T) across the partial circuit shown? *2/2



- ☐ 36 ohms
- ☐ 7 ohms
- ☒ 12 ohms
- ☐ 20 ohms
- ☐ 5 ohms



A/T - Find the direction of current for each -4M *



Up - top of page Down - bottom of page Into the page Out of the page Right on page Left on page Score

A) - as flowing through the wire ☒ ☐ ☐ ☐ ☐ ☐ --/0 ✗

B) - on exiting the solenoid ☐ ☒ ☐ ☐ ☐ ☐ 0/1 ✗

C) - on exiting the wire ☐ ☐ ☐ ☐ ☒ ☐ 1/1 ✓

D) - as flowing through the solenoid ☐ ☐ ☒ ☐ ☐ ☐ 0/1 ✗

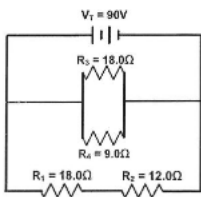
A/T - HVDC Itaipu is a high voltage DC transmission line in Brazil. If the line transmits power at 3.150GW, and has a resistance of 2.00Ω. -4M *

3.150 E09 3.150 E07 6.300 E07 7.937 E03 4.721 E05 Score

How much power in W, is a 1.0% loss? ☐ ☒ ☐ ☐ ☐ 2/2 ✓

What voltage in V, is used for the 1.0% loss? ☐ ☐ ☐ ☒ ☐ 2/2 ✓

A/T - Find the following values of the circuit shown - 6M *



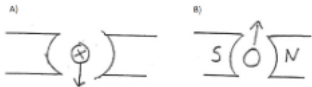
3.0 5.0 10.0 18.0 30.0 36.0 Score

I4 in Amps ☐ ☐ ☒ ☐ ☐ ☐ 2/2 ✓

V2 in Volts ☐ ☐ ☐ ☐ ☐ ☒ 2/2 ✓

I_T in Amps ☐ ☐ ☐ ☒ ☐ ☐ 2/2 ✓

A/T - Consider the motor effect for the following two pictures. Complete the missing Pole / Current flow - 4M



right left into the page out of the page Up top of page Down bottom of page Score

A) - which bar side is a magnetic north pole



0/2



B) - what is the direction of current flow



2/2

