Electricity and Electrical Energy - Set I

Phys Sci

Name_____ Class_____ Date_____

1 Moving **2.0 coulombs of charge** a distance of **6.0 meters** from point *A* to point *B* within an electric field requires a **5.0-newton force**. What is the **electric potential difference** between points *A* and *B*?

A 60 V
B 30 V
C 15 V
D 2.5 V

2 A metal sphere having an **excess** of +5 elementary charges has a **net** electric charge of

A 1.6×10^{-19} C
B 8.0×10^{-19} C
C 5.0×100 C
D 3.2×019 C

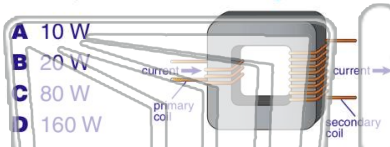
3 A lightning bolt transfers **6.0 coulombs** of charge from a cloud to the ground in **2.0 × 10^{-3} second**. What is the **average current**

4 The graph below shows the relationship between the work done on a charged body in an electric field and the net charge on the body.

5

7 in the secondary coil. If **20 watts** of power is supplied to the primary coil, the **power** developed in the **secondary coil** will be

A 10 W
B 20 W
C 80 W
D 160 W



positive charge **accumulates** because the glass rod

A gains electrons
B gains protons
C loses electrons
D loses protons

9 How much time is required for an operating **100-watt** light bulb to **dissipate** 10 joules of electrical energy?

A 1 s
B 0.1 s
C 10 s
D 1000 s

10 An electrostatic force of **20 newtons** is exerted on a charge of **8.0 × 10^{-2} coulomb** at point *P* in an electric field. The **magnitude** of the electric field intensity at *P* is

A 4.0×10^{-3} N/C
B 1.6 N/C
C 20 N/C
D 2.5×10^{2} N/C

Electricity and Electrical Energy - Set I

Phys Sci

Name_____ Class_____ Date_____

1 Moving **2.0 coulombs of charge** a distance of **6.0 meters** from point *A* to point *B* within an electric field requires a **5.0-newton force**. What is the **electric potential difference** between points *A* and *B*?

A 60 V
B 30 V
C 15 V
D 2.5 V

C

2 A metal sphere having an **excess** of +5 elementary charges has a **net** electric charge of

A 1.6×10^{-19} C
B 8.0×10^{-19} C
C 5.0 × 100 C
D 3.2 × 019 C

B

3 A lightning bolt transfers **6.0 coulombs** of charge from a cloud to the ground in **2.0 × 10^{-3} second**. What is the **average current**

4 The graph below shows the relationship between the work done on a charged body in an electric field and the net charge on the body.

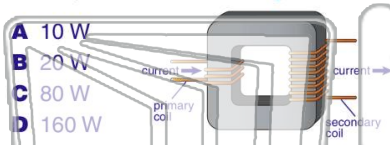
B

5

A

7 in the secondary coil. If **20 watts** of power is supplied to the primary coil, the **power** developed in the **secondary coil** will be

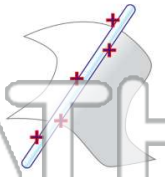
A 10 W
B 20 W
C 80 W
D 160 W



B

positive charge **accumulates** because the glass rod

A gains electrons
B gains protons
C loses electrons
D loses protons



C

9 How much time is required for an operating **100-watt** light bulb to **dissipate** 10 joules of electrical energy?

A 1 s
B 0.1 s
C 10 s
D 1000 s

B

10 An electrostatic force of **20 newtons** is exerted on a charge of **8.0 × 10^{-2} coulomb** at point *P* in an electric field. The **magnitude** of the electric field intensity at *P* is

A 4.0×10^{-3} N/C
B 1.6 N/C
C 20 N/C
D 2.5×10^{2} N/C

D