

Practice set 3

- The physical quantity which is expressed by the unit joule per coulomb is
 - electric potential,
 - electric current,
 - electrical resistance,
 - electric charge
- The potential at a point is 20 volts. The work done in bringing a charge of 2 coulomb from infinity to this point will be
 - 20 J
 - 40 J
 - 5 J
 - 10 J
- An ammeter is used to measure
 - Potential difference
 - electric current
 - electric resistance
 - electric power
- The current in a wire depends
 - Only on the resistance of the wire
 - Only on the potential difference applied
 - On both of them
 - On none of them
- Number of electrons in 1 m C of charge is
 - 6.25×10^{17}
 - 6.25×10^{15}
 - 1.6×10^{16}
 - 1.8×10^{-16}
- A current of 1 A flows in a wire for 5 minutes. Find the amount of electric charge that flows through the wire.
- Calculate the number of electrons present in 1 coulomb of charge.
- Name the instruments used to measure electric current and potential difference respectively. Which of these is connected in series and which is connected in parallel in a circuit?
- A particle with a charge of 2 coulomb is taken from a point A at a potential of 50 volt to another point B at a potential of 120 volt. Calculate the work done.
- The current through a conductor is 10 ampere. Explain this statement in terms of the charge flowing through the wire.
- When a 24 V battery is connected to a resistor, the current in it is 0.4 A. What is the resistance of the resistor? What should be the current through it if it is connected to a battery of 6 volt?

12. State ohm's law. Derive its mathematical form. From ohm's law define one ohm resistance.