
TUTORIAL 1

1. Rewrite the following as indicated:
 - a. $1500 \text{ pF} = \underline{\hspace{2cm}} \text{ nF}$
 - b. $0.06 \text{ } \mu\text{F} = \underline{\hspace{2cm}} \text{ pF}$
 - c. $10000 \text{ kHz} = \underline{\hspace{2cm}} \text{ MHz}$
 - d. $68 \text{ k}\Omega = \underline{\hspace{2cm}} \text{ M}\Omega$
 - e. $0.56 \text{ mA} = \underline{\hspace{2cm}} \text{ } \mu\text{A}$

2. Find the conductance of a resistor of resistance:
 - a. 100Ω
 - b. $50 \text{ k}\Omega$
 - c. $250\text{m}\Omega$

3. A conductor has a conductance of $25\mu\text{S}$. What is its resistance?

4. An e.m.f. of 220V is connected across a resistance and the current flowing through the resistance is 5A . What is the power developed?

5. Find the electric power of an electrical circuit that consumes 120 joules for 20 seconds .

6. In what time would a current of 15A transfer a charge of 25 C ?

7. A current of 10A flows for 15 minutes . What charge is transferred?

8. How long must a current of 100 mA flow so as to transfer a charge of 80 C ?

9. A $1.5\text{k}\Omega$ resistor, and there is 25 volts across the resistor. Determine the power (in watts) that the resistor dissipates.

10. A battery of e.m.f. 10V supplies a current of 5A for 2 minutes . How much energy is supplied in this time?