SESSION - I

Useful Equations

<u>Current</u>	$I = dQ/dt$	- measured in amperes (A)
<u>Current Density</u>	$J = I / A$ or $I = \int \vec{J}.d\vec{A}$	- measured in A/m^2
	$\vec{J} = ne\vec{v}_d$	
<u>Ohms Law</u>	$R = V / I$	- measured in ohms (Ω)
<u>Power</u>	$P = V . I = I^2R = V^2 / R$	- measured in Watts (W)
<u>Resistivity</u>	$R = r\dfrac{\ell}{A}$ where ρ is the resistivity	- measured in Ω-m
<u>Conductivity</u>	$\sigma = 1 / \rho$	-measured in mho/m or $(\Omega$-m$)^{-1}$