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General Physics I, Quiz 7
PHYS10200, Class year 98
03-25-2010

SN:_____, Name:_____

Chapter 23-25, Serway; ABSOLUTELY NO CHEATING!
Please write the answers on the blank space or on the back of this paper to save resources.

Chapter 23 - Problem 35
A proton accelerates from rest in a uniform electric field of 640 N/C. At some later time, its speed is 1.20×10^6 m/s (nonrelativistic, because v is much less than the speed of light). (a) Find the acceleration of the proton. (b) What is its kinetic energy at this time?

Chapter24 - Problem 43
A solid, insulating sphere of radius a has a uniform charge density ρ and a total charge Q. Concentric with this sphere is an uncharged, conducting hollow sphere whose inner and outer radii are b and c, as shown in Figure P24.57. (a) Find the magnitude of the electric field in the regions $r < a$, $a < r < b$, $b < r < c$, and $r > c$. (b) Determine the induced charge per unit area on the inner and outer surfaces of the hollow sphere.

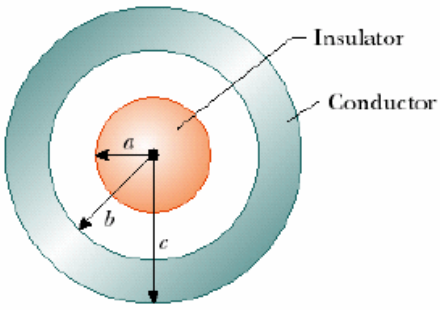

Figure 1