

Quiz 10A

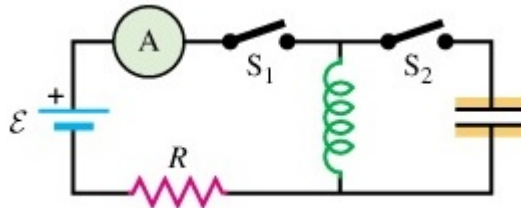
PHYSICS 208, WINTER 2016

SECTION:

NAME:

Instructions: *Carefully* read each question and write your work in a neat and organized manner.

Figure 1: A Simple RLC Circuit



Modified Problem 27.29

A 150-V battery is connected across two parallel metal plates of area A and separation d . A beam of alpha particles (charge of $+2e$, mass $6.64 \times 10^{-27} \text{ kg}$, and velocity $2 \times 10^7 \frac{\text{m}}{\text{s}}$) enters the region between the plates perpendicular to the electric field (see diagram on board). What magnitude and direction of the magnetic field are needed so that the alpha particles emerge undeflected from between the plates?