Universidad de Puerto Rico
Recinto Universitario de Mayagüez
Departamento de Ingeniería Eléctrica y Computadoras

INEL 4151 Asignacion #5: Semana de lunes 14 de octubre de 2013.

Nombre:_____ Sección:_____

1. The length of a piece of jumper wire used on a protoboard is 5.0 cm. Assuming AWG-20 (with a wire diameter of 0.812 mm) copper wire, (a) determine the resistance for this length of wire. (b) Determine the power dissipated in the wire for the 10 mA of current.

2. The potential field in a material with $\varepsilon_r = 10.2$ is $V = 12xy^2$ (V). Find **E**, **P**, **D**.

3. A parallel plate capacitor with easily removable dielectric has a capacitance of 48 nF with the dielectric in place and drops to 12 nF without the dielectric. Determine the relative permitivity of the dielectric.