Lab 2. Resistive Paper Electrostatics Analog: Preparation Sheet

Name: ___________________________ Date: ___________________________

Figure 1: Patterns to be painted on the resistive sheet

1 Introduction

Figure 2: Arrange patterns #1, #4, #5 on the same sheet
Laplace's equation is satisfied for steady current flowing in a resistive medium. Thus a resistive sheet can be used as an analog to plot the equipotentials and electric field lines, and to determine the capacitance, for a two-dimensional electrostatic field configuration. You will paint 3 sheets. Pattern #2 and #3 are painted on separate sheets. Pattern #1, #4 and #5 are arranged on the third sheet.

2 Procedures

Paint the patterns shown in Fig. 1 onto the resistive sheets with conductive paint. The shaded areas are to be painted. Use the compass if necessary. The smallest unit of the resistive sheet grid is 1cm. Put a cardboard below the resistive sheet when painting. Allow enough time to dry the paint.