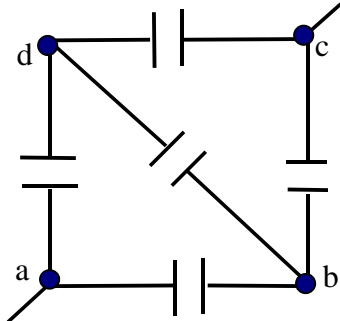


QUIZ II - Phys241E - 1999 (30 min.) (Closed Book)

- (1) The figure below shows a network of identical capacitors. Find the value of the capacitance between the points a and b, between a and c and between b and d.



- (2) A gaussmeter is a device for measuring magnetic fields. There exists a uniform magnetic field, B , in a certain region as shown in the figure on the left. You are also given an arrangement of a loop with current, I , and a spring of spring constant, k , attached to it as shown on the right. (a) How can you use this arrangement as a gaussmeter (show figure on your answer)? (b) Write down an expression for the magnetic field in terms of the given parameters (c) Can the same arrangement be used if the magnetic field is not uniform? Explain.

