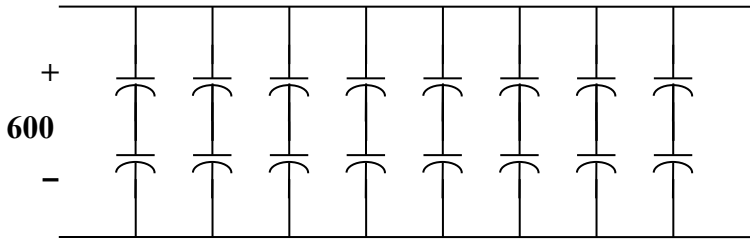
Chapter 6, Solution 83.

Your laboratory has available a large number of 10-μF capacitors rated at 300 V. To design a capacitor bank of 40-μF rated at 600 V, how many 10-μF capacitors are needed and how would you connect them?

Solution

Since two 10μF capacitors in series gives 5μF, rated at 600V, it requires 8 groups in parallel with each group consisting of two capacitors in series, as shown below:



Answer: **Eight groups in parallel with each group made up of two capacitors in series.**