

Sample Quizzes

Physics 132

QUIZ #4

25 points, 18 minutes

SCORE _____

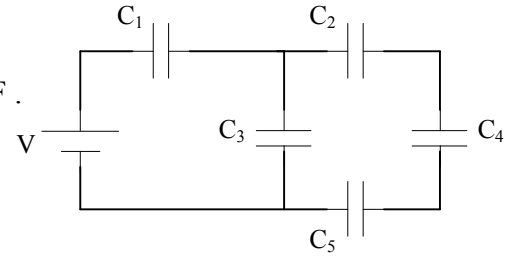
1) [20 points] For the circuit given in the figure to the right, take:

$V = 100 \text{ V}$, $C_1 = 1 \text{ } \mu\text{F}$, $C_2 = 2 \text{ } \mu\text{F}$, $C_3 = 3 \text{ } \mu\text{F}$, $C_4 = 4 \text{ } \mu\text{F}$, $C_5 = 5 \text{ } \mu\text{F}$.

Find: C_e , the equivalent capacitance of the capacitor network.

q_1 , the charge on C_1 .

U_3 , the energy stored in C_3 .



2) [5 points] Suppose an additional capacitor, $C_6 = 12 \text{ F}$, was added to the circuit as shown.

Would q_1 increase, remain the same, or decrease?

