Hundred capacitors connected in series/parallel. We have a set of 100 capacitors of arbitrary geometries, with different capacitances $C_1, C_2, ..., C_{100}$. Let C_{series} and C_{parallel} be the equivalent total capacitances of the capacitors connected in series [Fig. Q2.11(a)] and parallel [Fig. Q2.11(b)], respectively. Comparing these two equivalent capacitances, we have

(A) $C_{\text{series}} < C_{\text{parallel}}$.
(B) $C_{\text{series}} = C_{\text{parallel}}$.
(C) $C_{\text{series}} > C_{\text{parallel}}$.
(D) Depends on the geometries of the individual capacitors and nothing else.
(E) Depends on the relationship between particular values of $C_1, C_2, ..., C_{100}$.

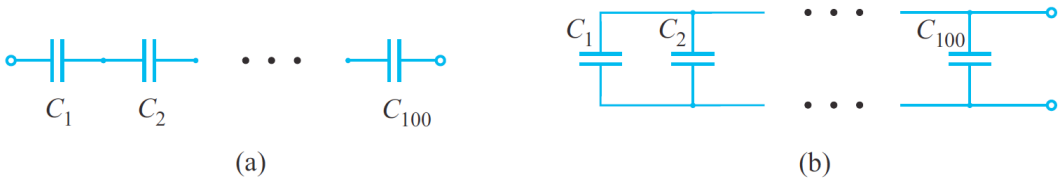

Figure Q2.11 Set of 100 arbitrary capacitors connected in series (a) and parallel (b); for Question 2.25.

Solution: (A)
Answer: (A)