

**Example 48.** Calculate the charge supplied by the battery in the arrangement shown in Fig. 2.55.

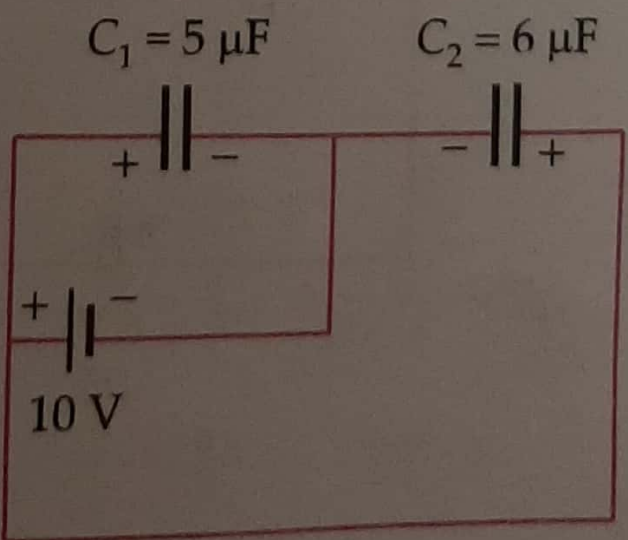
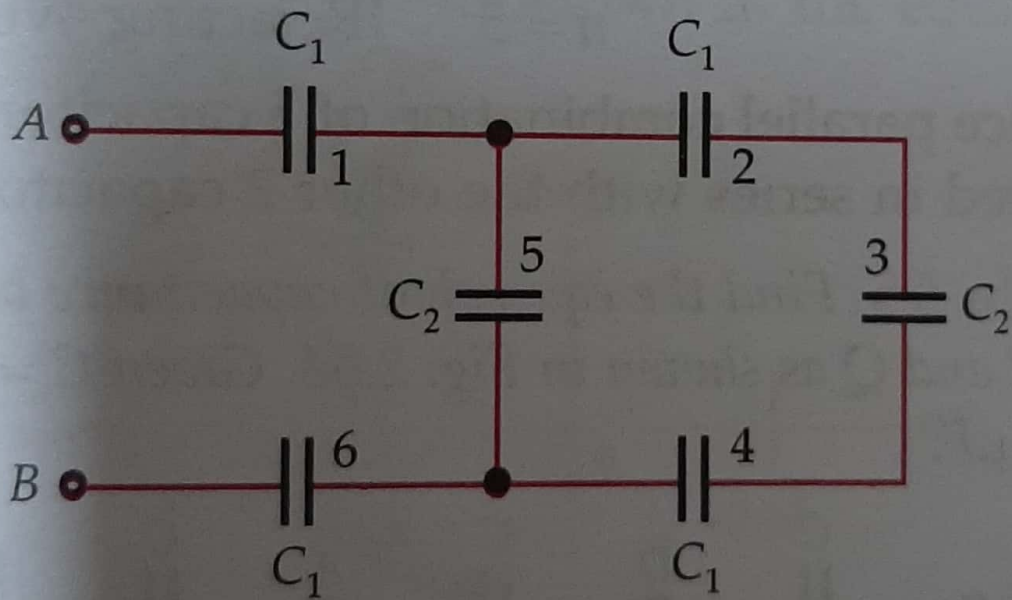


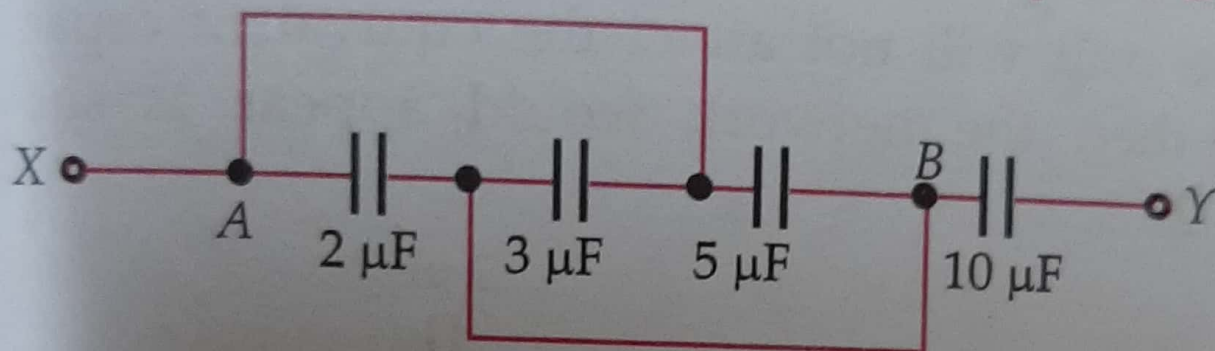
Fig. 2.55

**Example 51.** If  $C_1 = 3 \text{ pF}$  and  $C_2 = 2 \text{ pF}$ , calculate the equivalent capacitance of the given network between points A and B.



**Example 56.** Four capacitors are connected as shown in the Fig. 2.65. Calculate the equivalent capacitance between the points X and Y.

[CBSE D 2000]



**Example 67.** Two identical capacitors of  $12 \text{ pF}$  each are connected in series across a battery of  $50 \text{ V}$ . How much electrostatic energy is stored in the combination? If these were connected in parallel across the same battery, how much energy will be stored in the combination now?

Also find the charge drawn from the battery in each case.

[CBSE D 17]

**Example 68.** A  $12 \text{ pF}$  capacitor is connected to a  $50 \text{ V}$  battery. How much electrostatic energy is stored in the capacitor? If another capacitor of  $6 \text{ pF}$  is connected in series with it with the same battery connected across the combination, find the charge stored and potential difference across each capacitor.

[CBSE D 17]