

Chapter 6, Solution 21.

$$4\mu\text{F in series with } 12\mu\text{F} = (4 \times 12)/16 = 3\mu\text{F}$$

$$3\mu\text{F in parallel with } 3\mu\text{F} = 6\mu\text{F}$$

$$6\mu\text{F in series with } 6\mu\text{F} = 3\mu\text{F}$$

$$3\mu\text{F in parallel with } 2\mu\text{F} = 5\mu\text{F}$$

$$5\mu\text{F in series with } 5\mu\text{F} = 2.5\mu\text{F}$$

$$\text{Hence } C_{\text{eq}} = \mathbf{2.5\mu\text{F}}$$