

10. The equivalent capacitance is

$$C_{\text{eq}} = C_3 + \frac{C_1 C_2}{C_1 + C_2} = 4.00 \, \mu\text{F} + \frac{(10.0 \, \mu\text{F})(5.00 \, \mu\text{F})}{10.0 \, \mu\text{F} + 5.00 \, \mu\text{F}} = 7.33 \, \mu\text{F} .$$