26. The charge q after N cycles is obtained by substituting $t = NT = 2\pi N/\omega'$ into Eq. 33-25:

$$\begin{aligned} q &= Qe^{-Rt/2L}\cos(\omega' t + \phi) = Qe^{-RNT/2L}\cos(\omega'(2\pi N/\omega') + \phi) \\ &= Qe^{-RN(2\pi\sqrt{L/C})/2L}\cos(2\pi N + \phi) \\ &= Qe^{-N\pi R\sqrt{C/L}}\cos(\phi). \end{aligned}$$

We note that the initial charge (setting $N = 0$ in the above expression) is $q_0 = Q\cos\phi$, where $q_0 = 6.2\,\mu$C is given (with 3 significant figures understood). Consequently, we write the above result as $q_N = q_0 e^{-N\pi R\sqrt{C/L}}$ and obtain

$$\begin{aligned} q_5 &= (6.2\,\mu\text{C})e^{-5\pi(7.2\,\Omega)\sqrt{0.0000032\,\text{F}/12\,\text{H}}} = 5.85\,\mu\text{C} \\ q_{10} &= (6.2\,\mu\text{C})e^{-10\pi(7.2\,\Omega)\sqrt{0.0000032\,\text{F}/12\,\text{H}}} = 5.52\,\mu\text{C} \\ q_{100} &= (6.2\,\mu\text{C})e^{-100\pi(7.2\,\Omega)\sqrt{0.0000032\,\text{F}/12\,\text{H}}} = 1.93\,\mu\text{C}\ . \end{aligned}$$