

Homework 6

Question 1 $V(100\mu s) = 150mV e^{-\frac{100\mu s}{100\Omega * 1\mu F}}$

$$V(100\mu s) = 150mV e^{-1}$$

$$V(100\mu s) = 55mV^{-1}$$

Question 2 $V(100\mu s) = 150mV e^{-\frac{100\mu s}{200\Omega * 1\mu F}}$

$$V(100\mu s) = 150mV e^{-\frac{1}{2}}$$

$$V(100\mu s) = 91mV$$

Question 3 $I(10\mu s) = 150mA(1 - e^{-\frac{100\Omega * 10\mu s}{1\mu H}})$

$$I(10\mu s) = 150mA(1 - e^{-1000})$$

$$I(10\mu s) = 149.9mA$$

Question 4 $I(10\mu s) = 150mA(1 - e^{-\frac{200\Omega * 10\mu s}{1\mu H}})$

$$I(10\mu s) = 150mA(1 - e^{-2000})$$

$$I(10\mu s) = 149.9mA$$