

1.  $a = R, b = C, RC = 2.9 \text{ ms}$
2.  $v_1(t) = \text{constant } -5 \text{ V}$
3. a)  $v_1(t) = -10 \text{ V}$  before time  $t_0$  and exponentially decays to  $0 \text{ V}$  after that  
b)  $v_3(t) = -12 \text{ V}$  before time  $t_0 + 2 \text{ ms}$  and  $0 \text{ V}$  thereafter
4.  $\mathbf{V}_3 = 8\sqrt{2} \angle 45^\circ \text{ V}$
5.  $v_3(t) = 8\sqrt{2} \cos(37t + 45^\circ) \text{ V}$