

HW#4 Final Answers

If you think there is a mistake in the solution please send to Muqaibel@kfupm.edu.sa

P8.25

$$v_c = 100 + 5000te^{-50t} + 100e^{-50t} \quad \text{V}, \quad t \geq 0$$

P8.28

$$i_L = 48 + 12e^{-40t} \cos 30t + 66e^{-40t} \sin 30t \quad \text{mA}, \quad t \geq 0^+$$

P8.32

$$v_o = 50e^{-40t} - 50e^{-160t} \quad \text{V}, \quad t \geq 0$$

P8.37

$$i_o(t) = 20e^{-1000t} - 5e^{-4000t}, \quad \text{mA}, \quad t \geq 0^+$$

$$v_o(t) = 80e^{-1000t} - 5e^{-4000t}, \quad \text{V}, \quad t \geq 0^+$$

P8.47

Make sure that the sources are -160V and -60V, and the resistors are 200, 400 and 1000 ohms, some editions have a typo (400k).

$$v_c(t) = -60 - 450000te^{-5000t} - 40e^{-5000t}, \quad \text{V}, \quad t \geq 0^+$$