

Typo for 3TR4 Chap3

a) p42, Eq.(3.5):

$$y(t) = \int_0^t x(\tau)h(t - \tau)d\tau \quad (1)$$

b) p48, Eq.(3.8):

$$E = \int_{-\infty}^{\infty} x^2(t)dt \quad (2)$$

c) p53 first equation:

$$\mathcal{S}(\omega) = \begin{cases} 2\pi|X_n|^2, & \omega = n\omega_0 \\ 0, & \text{elsewhere} \end{cases}$$

d) p53, Eq. (3.20)

$$\mathcal{S}(\omega) = 2\pi \sum_{n=-\infty}^{\infty} |X_n|^2 \delta(\omega - n\omega_0) \quad (3)$$

e) p53, Eq. (3.23)

$$\begin{aligned} \mathcal{S}_y(\omega) &= \lim_{T_0 \rightarrow \infty} |X(\omega)|^2 |H(\omega)|^2 / T_0 \\ &= \mathcal{S}_x(\omega) |H(\omega)|^2 \end{aligned} \quad (4)$$

f) p54, first equation:

$$\mathcal{S}_x(\omega) = 2\pi \sum_{n=-\infty}^{\infty} |X_n|^2 \delta(\omega - n\omega_0) \quad \omega_0 = \text{fundamental freq.}$$

g) p54, But

$$Y_n = X_n H(\omega)|_{\omega=n\omega_0}$$

Hence

$$\begin{aligned} \mathcal{S}_y(\omega) &= 2\pi \sum_{n=-\infty}^{\infty} |Y_n|^2 \delta(\omega - n\omega_0) \\ &= 2\pi \sum_{n=-\infty}^{\infty} |X_n|^2 \delta(\omega - n\omega_0) |H(\omega)|^2 \\ &= \mathcal{S}_x(\omega) |H(\omega)|^2 |_{\omega=n\omega_0} \end{aligned} \quad (5)$$

h) p56, line 3: $x_2(t) = x'_2(t) + K_2$

i) p61: 5.

$$v_i(t) = \begin{cases} e^{-\alpha t} & t \geq 0 \\ 0 & t < 0 \end{cases}$$

j) p62, Figure 3.15(a):

