UNIVERSITY OF ILLINOIS

Department of Electrical and Computer Engineering ECE 417 MULTIMEDIA SIGNAL PROCESSING

Lecture 27 Sample Solutions

Problem 27.1

1. $\delta[N] = \frac{t[N]}{y[N]} - \frac{1-t[N]}{1-y[N]} \label{eq:delta}$

2. $\delta[n] = a\delta[n+1]\dot{y}[n+1]$

3. $\frac{\partial E}{\partial b} = \sum_n \delta[n] \dot{y}[n] x[n]$

Problem 27.2

$$\delta[n] = f[n+1]\delta[n+1]$$