ECGR4124 **Sample Quiz 2009** Name: _____

Open handouts, 1 sheet front/back notes, NO CALCULATOR

5 Points Each

1. When the input to an accumulator system is $x[n] = \delta[n] + \delta[n-1]$, the output y[n] is

   a) $\delta[2n-1]$ b) $2\delta[n-1]$ c) $u[n] + u[n-1]$ d) none above

2. Circle the BIBO stable impulse response below.

   a) $h[n]=(0.8)^{-n}\, u[n]$ b) $h[n]=(2)^{-n}\, u[n]$ c) $h[n]=u[n]$ d) none above

3. A continuous-time signal $\cos(100\pi\, t)$ sampled at 1000 samples/second would correspond to a discrete-time frequency of ω =

   a) 0.1π rad/sample b) 5 rad/sample c) $0.2\,\pi$ rad/sample d) none above

4. The system with input x[n] and output $y[n] = 2\,x[n] + 3x[n-5]$ is linear.

   a) True b) False

5. If $x[n] = u[n-1] - 2\,(\delta[n-1])^2$ then, x[1] equals

   a) -1 b) 1 c) ∞ d) none above