

**ECE 310: Quiz #7 (3pm Section E) Fall 2018**

**UIN:** \_\_\_\_\_

**Name:** \_\_\_\_\_

1. (6 pts) Let  $x[n] = \{1, 0, 0, 1\}$ ,

(a) Compute the DFT  $X[k]$  of  $x[n]$ .

(b) Sketch the magnitude of  $X[k]$ .

2. (4 pts) Let  $X[k]$  be the DFT of  $x[n] = \{0, 3, 2, 1\}$ . Determine the sequence  $y[n]$  whose DFT is given by  $Y[k] = 2(-1)^k X[k]$ .