ECE 150 Digital Logic Design, Fall 2023
Quiz 4, November 15th 2023

Problem 1 (10 pts).
Consider the common annode 4 x 4 LED matrix below, with logical variables (A,B,C,D) as row inputs and (a,b,c,d) as column inputs.
(a) For each time instance of the timing diagram below $\left(t_{1}, t_{2}, t_{3}, t_{4}\right)$, list the LEDs which are ON. Give answers in (row, column) format (ex. (A,d)).


Figure 1: Left: 4 x 4 common anode LED matrix. Right: row/column timing diagram.

