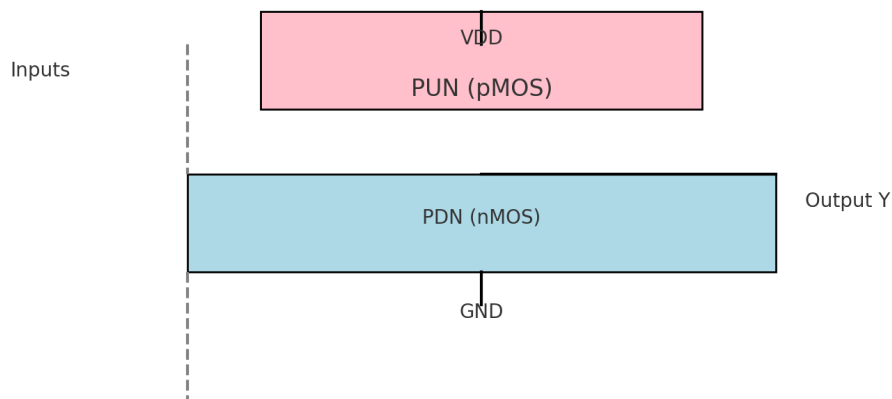# CSE460 Assignment 1 - Detailed Solutions with Diagram

## Question 1: CMOS Implementation



(a) Y = ((A.B.C) + D).E:

- Pull-down (nMOS): (ABC series + D parallel) series E.

- Pull-up (PUN) is complement: parallel ABC, series D, parallel E.


(b) Y = (A+(B.C)).(D+E)

- PDN: (A parallel (B series C)) series (D parallel E).

- PUN: Complement PDN structure.