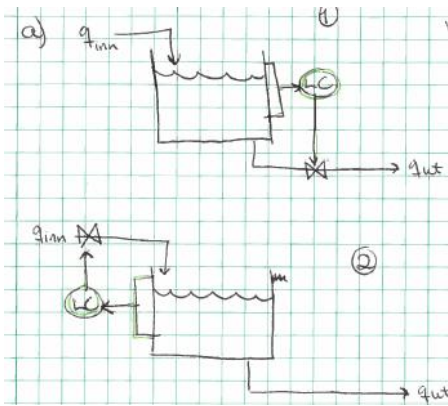


## Problem 2015

(5%) A tank has an inflow and an outflow and we want to keep the level in the tank constant. Suggest two alternative control structures based on feedback (both should have a LC). When should they be used?

Solution.



- (a) See the figure for the two alternative structures. 1) If the inflow is given (a disturbance) then we need to use the outflow for level control. 2) If the outflow is given (a disturbance) then we need to use the inflow for level control. Both structures are expected to work well.