CSC 355

A1

Q6. $F = BC(C+\bar{C}A) + CA(\bar{B}+D) + C(\bar{B}A+D)$

$= BC(C+A) + CA(\bar{B}+D) + C(\bar{B}A+D)$ simplification

$= BC + BA + C\bar{A}\bar{B} + CAD + C\bar{B}A + CD$ distribute

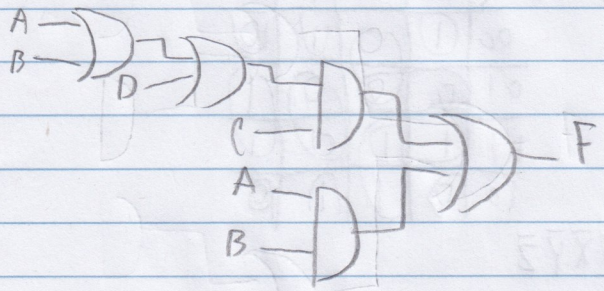
$= BC + BA + \bar{B}CA + CD$ idempotent, absorbtion

$= C(B+\bar{B}A) + BA + CD$ distribute

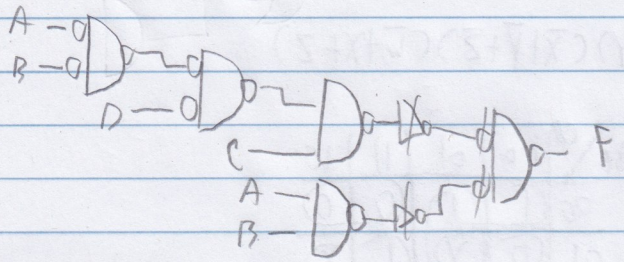
$= C(A+B) + BA + CD$ simplify

$= CA + CB + BA + CD$ distribute

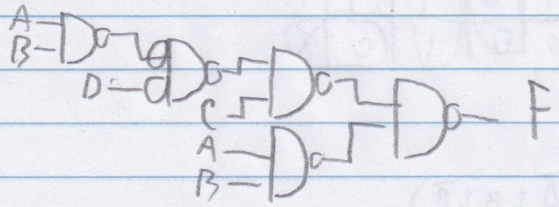
$= C(A+B+D) + BA$



initial



convert to NAND



simplify