

# Design of Complex Boolean Expression using CMOS:

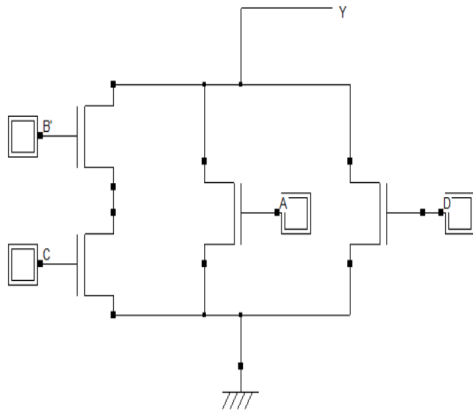
$$Y = [(A + B'.C) + D]'$$

Design the above boolean expression using CMOS

## Pull Down Network:

Our objective is to make  $Y=0$

$$Y' = [(A + B'.C) + D]$$



Do it yourself in copy

$$Y = [(A.B' + C').D]$$

## Pull Up Network:

Our objective is to make  $Y=1$

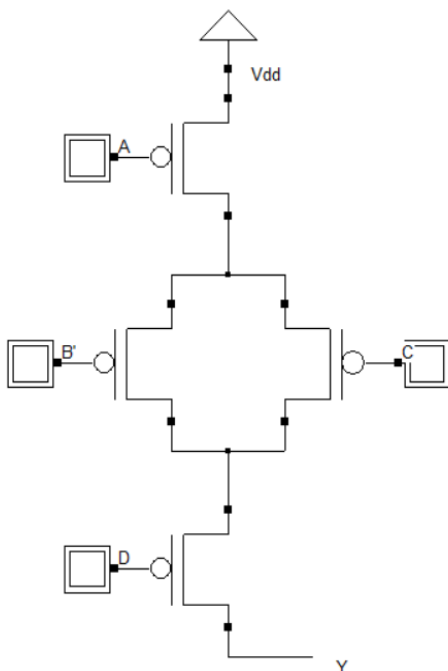
$$Y = \overline{[(A + B'.C) + D]}$$

$$Y = \overline{(A + B'.C)} . \overline{D}$$

$$Y = \overline{A} . \overline{(B'.C)} . \overline{D}$$

$$Y = \overline{A} . (B + \overline{C}) . \overline{D}$$

$$Y = \overline{A} . (B + \overline{C}) . \overline{D}$$



## FINAL DESIGN

