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COE 360, Principles of VLSI Design, Term 982
Quiz# 2

Date: Monday, March 1

- (I)** Write down the voltages at the nodes indicated below assuming $V_{tn}=1\text{v}$ and $V_{tp}=-1\text{v}$.

- (II)** Implement the following function in CMOS using the minimum number of transistors assuming the availability of inverted inputs.

$$Y = A B C + A' C D + B C D$$

(III) Implement a 4X1 Multiplexor in CMOS using the minimum number of transistors, assuming the availability of inverted inputs.

(IV) Show the implementation of a rising-edge D-Flip Flop in CMOS.