Midterm

Time Limit: 1:30:00 Time Left:Time Exceeded Vatsal Shreekant: Attempt 1

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Question 1 (20 points) *Saved*

Design a static CMOS gate that has the following output.

Out = !((A*B)+(C*D))

a) Draw the transistor-level schematic of your design. Sizing is not required. (8 marks)

b) Draw stick diagram of the gate that you have designed (please minimize layout area by maximizing diffusion sharing and clearly label metal, poly, n-diffusion and p-diffusion regions on your stick diagram). (8 marks)

c) Estimate the area of the gate based on your stick diagram. (4 marks)

Add a File Record Audio Record Video

VS_Q_1.pdf (626.7 KB)

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Question 2 (20 points) *Saved*

Assume the on-resistance of a unit nMOS is 15Kohms and the on-resistance of a