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IAT-2

Answer any 5 questions.

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Explain the following non-ideal characteristics of MOSFET:a) Velocity saturation and mobility degradation b) Channel length modulation c) Body Effect

10 points

Fabricate an n-channel MOSFET with neat diagrams and explicit description.

10 points

With neat diagrams, describe the structure and operation of n-channel 10 points enhancement MOSFET

Fabricate a CMOS implementing N-Well Process with neat diagrams and 10 points explicit description.



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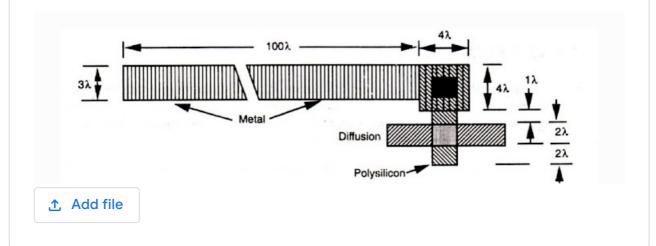
Derive the expression for drain to source current in three operating regions of n-channel MOSFET.

10 points



Calculate the area capacitance of the following structure in terms of standard unit of capacitance (\square Cg) for 5 μ m process Given: Relative capacitance of Metal1 to substrate: 0.075; Polysilicon to substrate: 0.1; Gate to channel capacitance: 1

10 points



Draw the Stick Diagram for the following using CMOS Logic:a) Y = (A + B) + (A + B) +



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