QUIZ NO. 5

NAME_____Score_____/10

A PMOS common-drain amplifier is shown. Assume the parameters of the transistor are k_p = 0.5mA/V^2, V_{TP} = -1V, and λ = 0. (a.) If I_{SD} = 0.5mA, find the small signal model parameter values for g_m and r_o. (b.) Find an algebraic expression for the small signal input resistance, R_{in}, the output resistance, R_{out}, and the voltage gain, v_{out}/v_{in}. (c.) Numerically evaluate the small signal input resistance, R_{in}, the output resistance, R_{out}, and the voltage gain, v_{out}/v_{in}.

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