

**DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY, KANPUR**

**EE 210**

**MINI-QUIZ #9B**

**7.4.21**

**Total Marks: 10**

**Total Time: 10 mins.**

$V_i$  is a sinusoid, having  $\pm 4$  V amplitude, and zero DC offset. Data: For  $M_1$ :  $V_{TN0} = 0.7$  V,  $k'_N = 50 \mu\text{A}/\text{V}^2$ ; for  $M_2$ :  $V_{TP0} = -0.6$  V,  $k'_p = 20 \mu\text{A}/\text{V}^2$ ; neglect body effect and CLM effect.

- What is the standby power dissipation of the stage? Justify your answer.
- Find the *Total Crossover Distortion* (TCD) present in the output ( $V_0$ ).
- Evaluate  $(W/L)_1$  and  $(W/L)_2$  for  $V_0$  to have  $\pm 3$  V swing.

