

DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

EE 210

MINI-QUIZ #3

3.2.21

Total Marks: 10

Total Time: 10 mins.

Find  $V_B$  for *best biasing* (BB). Data:  $V_{TN0} = 0.7 \text{ V}$ ,  $k'_N = 40 \mu\text{A}/\text{V}^2$ ,  $(W/L) = 10$ ,  $\gamma = 0.4 \text{ V}^{1/2}$ ,  $\phi_F = 0.35 \text{ V}$ , and  $\lambda = x \text{ V}^{-1}$  (if the last digit of your roll number is 0 to 4:  $x = 0.08$ , and 5 to 9:  $x = 0.2$ ).

