DEPARTMENT OF ELECTRICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

EE 210 **MINI-QUIZ #10B** **28.4.21**
Total Marks: 10 **Total Time: 10 mins.**

The biasing circuits are omitted for simplicity. Use the technique of Miller Effect Approximation. Neglect body effect and CLM effect.

a) Choose R_2 such that the pole frequency of the input circuit is 5 MHz.
b) Hence, find the pole frequency of the output circuit.
c) What is the gain-bandwidth product (GBP) of the circuit?

Data for M: g_m = 100 μA/V, C_{gs} = 25 pF, C_{gd} = 1 pF, C_{sb} = 0.2 pF, C_{db} = 0.1 pF.