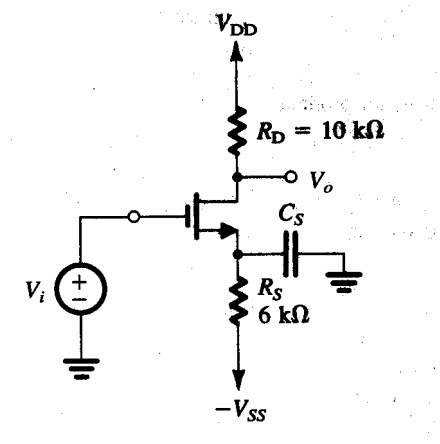
King Fahd University of Petroleum and Minerals
Electrical Engineering Department
EE-303 Electronics II
Exam I (061)

Name:	I.D#	No.	Sec.# 01

Q1) The amplifier shown is biased such that g_m=1mA/V. Find the value of high frequency poles <u>with and without</u> C_S. Neglect r_o and assume C_{gs}=0.3pF and C_{gd}=0.1pF.

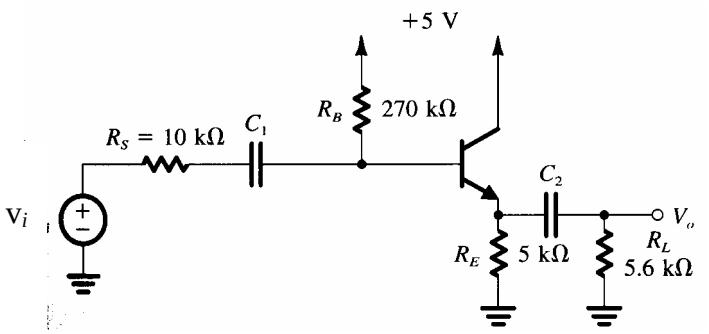


Q2) For the emitter follower shown below assume $\beta_o = 200$ and neglect r_o and r_x.

(a) Determine the value of the low frequency poles assuming C_1=C_2=1μF.

(b) What are frequncies of the low frequncy zeroes.

(c) Is the bandwidth of this amplifier is expected to be high or low? Why?



Q3) (a) What is the main problem with the inverting-integrator based on op-amp?
(b) A non-inverting amplifier with nominal gain of 100V/V employs an op amp having a dc gain of 10^4 and unity-gain frequency of 10^6 Hz. What is the 3dB pole of amplifier? What will be the gain of the amplifier at frequency 10 times the pole?