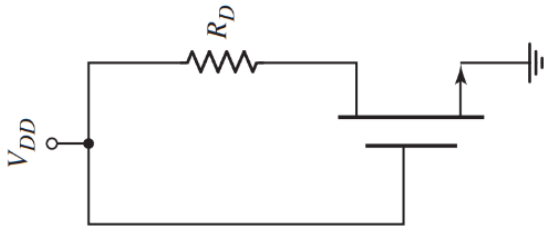
BRAC University
Semester: Spring 2024
Course: CSE 251, Section: 19

Assignment: 3	**Deadline:** 25 April 2024 (11:59 PM)	**Marks:** 100
Q1-Q4: CO2		

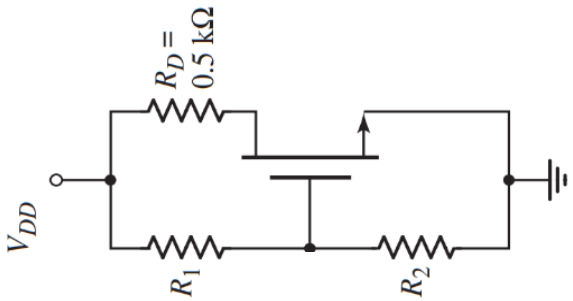
Q1. Determine i_D for the right hand side circuit. You are given, $V_{DD} = 3V, R_D = 2k\Omega$, $V_T = 1V, K_n = 0.25\ mA/V^2$.

[15]

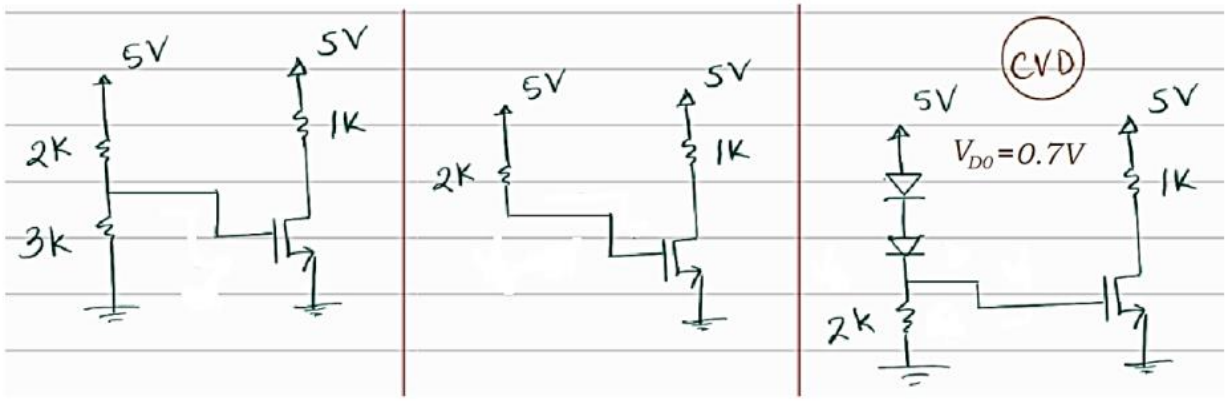


Q2. Determine i_D for the right hand side circuit. You are given, $V_{DD} = 6V, R_1 = 2k\Omega, R_2 = 10k\Omega,\ V_T = 0.8V, K_n = 0.1\ mA/V^2$.

[15]



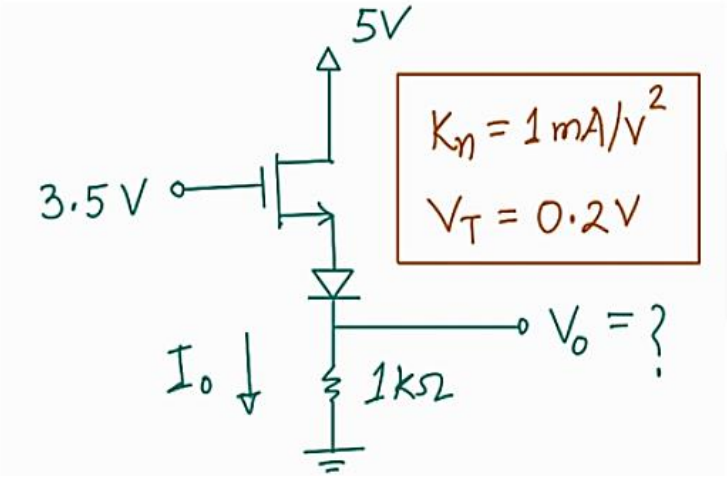
Q3. For the three circuits below, you have $V_T = 1V, K_n = 0.5\ mA/V^2$. Determine which of the $1k\Omega$ resistors dissipate the most power (in mW). *[15x3=45]*



(P.T.O.)

Q4. Find the "?" marked voltage below. Use CVD model for the diode just like Q3.

[25]



Q5. **(BONUS)** Using $V_T = 1V, K_n = 2mA/V^2$, determine V_x for the circuit below.