

Homework 5 – Due Monday 10/17/2016

Problems (not review questions): 7.25, 7.30 (use T-model), 7.32, 7.59, 7.64, 7.71

Solutions for some of the problems are on mycourses:

Book_solutions.pdf, no solution is given for 7.30.

Solution for 7.32 → NMOS: $g_m=1.25 \text{ mA/V}$, $r_o=25 \text{ kohm}$, $V_{ov}=0.16 \text{ V}$, PMOS: $g_m=0.63 \text{ mA/V}$, $r_o=30 \text{ kohm}$, $V_{ov}=0.316 \text{ V}$

Figure for problem 7.25 →

EEEE381 HOMEWORK FORMAT GUIDELINES

GENERAL: NEATNESS AND ORGANIZATION WILL BE GRADED. THE SAME GUIDELINES SHOULD BE FOLLOWED FOR EXAMS.

- ALL HOMEWORK IS TO BE HANDED ON ENGINEERING GRAPH PAPER or PLAIN WHITE PAPER (8.5 inch x 11 inch).
- NUMBER EACH PROBLEM INCLUDING CHAPTER IT COMES FROM
- HIGHLIGHT EACH FINAL ANSWER WITH A BOX AND INCLUDE APPROPRIATE UNITS.
- INCLUDE YOUR NAME ON EVERY PAGE
- ALL PROBLEMS SHOULD BE TURNED IN, IN ORDER!
- IF WORK IS NOT LEGIBLE, IT WILL NOT BE GRADED
- CROSS OUTS ARE NOT ACCEPTABLE. USE A PENCIL AND ERASER OR PEN AND WHITE-OUT. (Green-out?)
- PRESENT SOLUTION IN A FORMAT THAT PROCEEDS FROM LEFT TO RIGHT, TOP TO BOTTOM. IF ORGANIZATION OF SOLUTION IS NOT CLEAR, PROBLEM WILL NOT BE GRADED.
- PROVIDE A CONCISE DESCRIPTION OF YOUR METHOD OF SOLUTION. IF NONE IS PROVIDED, NO PARTIAL CREDIT WILL BE AFFORDED.
- PROVIDE AN APPROPRIATELY LABELED CIRCUIT DIAGRAM. IF CIRCUIT IS MODIFIED, INCLUDE MODIFIED DIAGRAM(S).
- MAKE SURE ALL PAGES ARE ATTACHED TO EACH OTHER SECURELY. STAPLES ARE A CLASSIC WAY TO DO THIS.
- -REMEMBER- HOMEWORK ASSIGNMENTS ARE NOT JUST ABOUT LEARNING TO DO THE PROBLEM. IT IS ABOUT LEARNING TO PRESENT YOUR WORK SO OTHERS CAN UNDERSTAND WHAT YOU DO - A VALUABLE SKILL IN THE WORKPLACE.

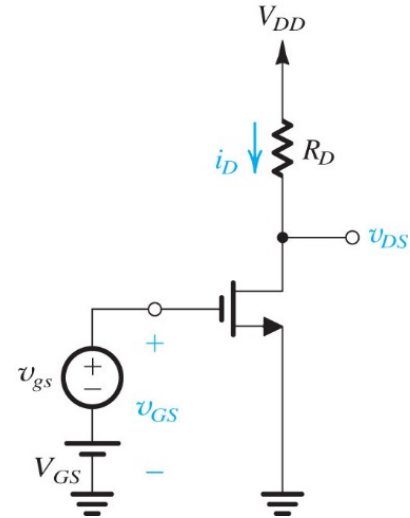


Figure 7.10

Things to remember

- 1) Re-Draw the Circuit on your homework sheet.
- 2) Show all work.
- 3) Final answer should be in decimal form.
- 4) Final answers should be boxed.
- 5) Your name should be on every page.