

**ECE 2201
Term A-2023**

Problem Set 3

Due: Monday, September 18, 2023

NOTES:

(1) You must show all work to receive credit. Answers alone are not sufficient.

(2) The book problems have been used before and I am sure solutions are floating about. Be sure you know how to do these problems ON YOUR OWN, since you will be tested in each area.

MOSFETS

Section 5.1: Device Structure and Physical Operation (p. 293)

1. D5.5
2. 5.9
3. 5.10
4. 5.11 (PMOS)
5. 5.12
6. 5.14

Section 5.2: Current-Voltage Characteristics (p. 294)

7. 5.16
8. 5.17
9. 5.22
10. 5.40 (PMOS)

Section 5.4: Technology Scaling (Moore's Law) and Other Topics

BONUS

B1.*5.61

Text Book: Sedra & Smith, *Microelectronic Circuits, 8th ed.*, Oxford University Press, USA, 2020.