**ECEG 350** **Electronics I** **Fall 2026**

**Selected Answers to HW #7**

Remember to explain all answers in your solutions. You will not receive credit for merely repeating an answer given here. If an answer is not given, it is either because the solution is trivial or because disclosure of the answer would reveal too much of the solution to the problem.

It is possible that one or more of the answers given below is incorrect. The faster that answers are posted, the more likely that a mistake could have been made in the rush to prepare them. You should develop the ability to evaluate the accuracy of any information that you rely on. If you suspect that an answer below is incorrect, please let me know as soon as possible.

**1.** a. $v_{DS} = 1.6$ V; $i_D = 3.5$ mA
b. $v_{DS} = 9.8$ V; $i_D = 4.5$ mA

**2.** $W_1 = 3.7$ μm [other widths not given]

**3.** a. $R_D = 3.7$ kΩ; $R_S = 3.7$ kΩ; $R_B/R_A \approx 2.0$
b. $R_D = 4.1$ kΩ; $R_S = 2.8$ kΩ; $R_B/R_A \approx 1.4$

**4.** $v_{DS} = 0.29$ V; $P_{diss} = 22$ mW

**5.** $R_D = 3.5$ kΩ; $R_S = 1.0$ kΩ;

**6.** $V_{DS} = 4.3$ V; $V_{GS} = 2.1$ V; $V_{DS}$ is about 3.2 V above the saturation-triode boundary.