

The University of Portland  
Donald P. Shiley School of Engineering

EE352  
Electronic Circuits II  
Optional Extra Credit Homework

**Assigned:** Mon, Feb 24, 2020

**Due:** Fri, Mar 13, 2020

**Problems:**

1) **7.5-points added to your Exam 1 grade, no partial credit.**

Solve Text 10.108 part a) in PSPICE using AC Sweep Analysis with Bias Point Details turned on. Set AC Sweep Type to Decade, set Pts/Decade=10, set Start Freq=1, and set End Freq=1000MEG. Use QbreakN3 NPN transistor and edit its model as follows: (BF=100 TF=300pS CJC=2pF MJC=0 CJE=0 MJE=0). Set  $R_S=0$  and  $C_e=100\mu\text{F}$ . Please turn in your annotated PSPICE schematic, one-page annotated xxx.out file, and your annotated PSPICE Bode Plot printouts. Note that your xxx.out file gives all of the PSPICE calculated DC analysis plus AC parameters such as  $C_\pi$ ,  $C_\mu$  and  $f_t$ , etc which you can directly compare to your homework 4 hand-calculations.

2) **7.5-points added to your Exam 1 grade, no partial credit.**

Repeat Problem 1 to solve 10.108 part c) in PSPICE. Again, set  $R_S=0$ . Note, there is no  $C_e$  in this problem.