

ECE317

Final Exam Study Guide – Spring 2022

- **The final is a multiple-choice exam so bring a Scantron Form No. 882-E with you. These are available at the PSU bookstore. A pencil and erasure will also be needed.**
- **Calculators or any device that determines roots directly are NOT permitted to be used.**
- **You are permitted one sheet (8 ½ x 11) with notes. Written on both sides is OK.**
- The Bode Plot Summary and Steady-State Error Table will be provided.

Material covered:

- The final exam is comprehensive; however, there will be more questions on topics covered since the midterm exam.
- The topics covered since the midterm are:
 - i. Controller (compensator) design using asymptotic Bode plots
 - ii. Steady state error
 - iii. Desirable loop requirements
- Be able to do all the problems in the midterm exam.
- Be able to do all the quizzes undertaken this term.
- Be able to do all the homework problems covered this term.
- There may be questions related to the Labs.
- Be able to answer questions that feature a PECS schematic.
- Understand phase and gain margins, how they are specified and how they relate to system stability.
- Understand system type (also referred to as system type number) and how it is obtained.
- Be clear about how steady state error is defined for both 1) unity gain, and 2) non-unity gain feedback systems.
- Understand practical loop gain requirements over different frequency ranges.