



EE-154/CMPE-241  
Winter 2007  
Due: 8PM, 07-Feb-2007

Homework #5: Root Locus Method.

Problems are from *Franklin, Powell, Emami, Feedback Control of Dynamic Systems*, 5<sup>th</sup> Edition (FPE). Read Chapter 5 (twice) to help you understand this. Note that this material IS covered on the midterm. Midterm will be in class, on 8-Feb-07. Solution set will be posted at 8PM on the 7<sup>th</sup> (note the due date here).

1. Midterm Review will be at 8PM, 7-Feb-2007, in E2 (Room TBD).
2. FPE 5.1 (b) and (d-iii).
3. FPE 5.2. Rough sketches are OK.
4. FPE 5.4 (a).
5. FPE 5.5 (d).
6. FPE 5.6 (c).
7. FPE 5.7 (d).
8. FPE 5.8 (f).

The point of the exercise is to learn to sketch the root locus by hand. It is OK to check your answers using MATLAB, but don't rely on it. Learn to be critical observers. The MATLAB command is *rlocus* and *rlocfind*. Type "help" for full descriptions.