

REVIEW FOR EXAMINATION NO.3

Examination No. 3 will be given during class on Monday, April 12, 2004 from 9:05am to 9:55am. It will last for 55 minutes and is closed book. One page of 8.5x11 notes is permitted, front and back. The exam will consist of 4 problems. Below is a list of the material for which you are responsible.

Feedback

Recognize feedback loops and the differences between positive and negative feedback
Identify and classify the four types of amplifiers and their associated feedback topologies
Determine the effect of negative feedback upon amplifier performance
Calculate the loop gain while accounting for the loading of the feedback network
Be able to use the return ratio method to calculate the closed loop gain of a feedback circuit
Use Blackman's formula to determine resistance at a port
Understand the limitations of negative feedback

High Performance Op Amps

Low output resistance op amps - MOS with and without feedback, BJTs
High speed/frequency op amps
Differential output op amps - common mode output voltage stabilization
Micropower op amps, op amps operating in weak inversion
Low voltage circuits and operational amplifiers
How to improve the performance of an op amp in general and what tradeoffs are necessary