Carnegie Mellon University

Department of Electrical and Computer Engineering

18-200 **Fall 2000**

Mathematical Foundations of Electrical Engineering

Problem Set 7

Issued: Tuesday, November 7
Due: Thursday, November 16

Do the following problems from these Problem Set sections of Kreyszig, chapters 6 and 7:
You are encouraged to check your work with MATLAB

Section 6.6 p. 349-350 : Cramer's Rule and determinants.

1. Problem 9
2. Problem 12 (choose your row or column wisely!)
3. Problem 18

Section 6.7 p. 357-358: Matrix Inverses using Gauss-Jordan and determinants

Unlike what the book says, calculate the matrix inverse (if it exists) of the matrices in these problems by both the Gauss-Jordan and the determinant methods, and show that you get the same result.

1. Problem 1
2. Problem 2
3. Problem 3
4. Problem 9

Section 7.1 p. 375 : Eigenvalues and Eigenvectors.

1. Problem 7
2 Problem 11
3. Problem 12

Chapter 7 review, p. 398: More Eigenvalues and Eigenvectors.

1. Problem 14
2. Problem 16