

NAME: AGWANIRU ROSEMARY

CLASS DEPARTMENT: OFFMECHANICAL ENGINEERING

MATRIC NO: 19/EN601/003

ASSIGNMENT (4)

ai) code on n-file

1- Command window

2- clear

3- clc

4-  $A = [1, -2, -1, 3; 2, 3, 0, 1; 1, 0, -4, -2; 0, -1, 3, 1]$

5-  $\lambda = \text{eig}(A)$

Output

A =

1	-2	-1	3
2	3	0	1
1	0	-4	-2
0	-1	3	1

lambda =

2.4323 + 2.2437i

2.4323 - 2.2437i

-1.9323 + 1.7651i

-1.9323 - 1.7651i

aii) The system is unstable because the eigenvalues are both positive and negative not only negative.