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MATRIC NUMBER: 16/ENG07/028

DEPARTMENT: PETROLEUM ENGINEERING

ENG 281 ASSIGNMENT 4

1. commandwindow
2. clear
3. clc
4. close all
5. A=[1 -2 -1 3;2 3 0 1;1 0 -4 -2;0 -1 3 1]
6. eigenA= eig(A)

**ANS**

A =

1 -2 -1 3

2 3 0 1

1 0 -4 -2

0 -1 3 1

eigenA =

2.4323 + 2.2437i

2.4323 - 2.2437i

-1.9323 + 1.7651i

-1.9323 - 1.7651i

II) The stability of the multivariable system is **UNSTABLE**

Reason: the real eigen values of the system contain both positive and negative numbers therefore the system is unstable.