DAFE MERCY EBELE

ELECT/ELECT ENGINEERING

16/ENG04/014

ENG 281

**ANSWERS TO ASSITGNMENT IV**

**QUESTION 1**

1. clc
2. clear

**QUESTION 2(i)**

commandwindow

clear

clc

A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]

mercy= det(A)

A =

2 3 7 9 4

3 7 9 12 5

4 8 5 6 9

5 9 2 4 5

6 2 3 7 8

mercy =

-765.0000

**QUESTION 2(ii)**

commandwindow

clear

clc

A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]

dafe= transpose(A)

A =

2 3 7 9 4

3 7 9 12 5

4 8 5 6 9

5 9 2 4 5

6 2 3 7 8

dafe =

2 3 4 5 6

3 7 8 9 2

7 9 5 2 3

9 12 6 4 7

4 5 9 5 8

**QUESTION 2(iii)**

commandwindow

clear

clc

A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]

rhurhu= inv(A)

A =

2 3 7 9 4

3 7 9 12 5

4 8 5 6 9

5 9 2 4 5

6 2 3 7 8

rhurhu =

1.8915 -1.4026 -0.3124 0.7843 -0.2078

-0.4379 0.3268 0.0523 -0.0392 -0.0196

2.5725 -1.8392 -0.0863 0.7647 -0.5176

-1.8876 1.4654 0.0105 -0.6078 0.3961

-0.6222 0.3778 0.2444 -0.3333 0.1333

commandwindow

clear

clc

A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]

rhurhu= inv(A)

racheal= rats(rhurhu)

A =

2 3 7 9 4

3 7 9 12 5

4 8 5 6 9

5 9 2 4 5

6 2 3 7 8

rhurhu =

1.8915 -1.4026 -0.3124 0.7843 -0.2078

-0.4379 0.3268 0.0523 -0.0392 -0.0196

2.5725 -1.8392 -0.0863 0.7647 -0.5176

-1.8876 1.4654 0.0105 -0.6078 0.3961

-0.6222 0.3778 0.2444 -0.3333 0.1333

racheal =

5×70 char array

' 401/212 -108/77 -239/765 40/51 -53/255 '

' -67/153 50/153 8/153 -2/51 -1/51 '

' 656/255 -469/255 -22/255 13/17 -44/85 '

' -319/169 148/101 3/287 -31/51 101/255 '

' -28/45 17/45 11/45 -1/3 2/15 '

**QUESTION 3**

commandwindow

clear

clc

A= [0 10 4 -2; -3 -17 1 2; 1 1 1 0; 8 -34 16 -10]

B= [-4; 2; 6; 4]

L= inv(A)

M= L\*B

A =

0 10 4 -2

-3 -17 1 2

1 1 1 0

8 -34 16 -10

B =

-4

2

6

4

L =

-0.1786 -0.1020 0.5714 0.0153

0.0357 -0.0153 0.0357 -0.0102

0.1429 0.1173 0.3929 -0.0051

-0.0357 0.1582 0.9643 -0.0612

M =

4.0000

-0.0000

2.0000

6.0000